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THE SCIENCE OF LANGUAGE.



LECTURES
ON
THE SCIENCE OF LANGUAGE

DELIVERED AT THE
ROYAL INSTITUTION OF GREAT BRITAIN
IN
APRIL, MAY, AND JUNE, 1861.

BY MAX MULLER, M.A.

**FELLOW OF ALL SOULS COLLEGE, OXFORD: CORRESPONDING MEMBER OF THE
IMPERIAL INSTITUTE OF FRANCE.**

*"Opera naturale è ch' nom favella,
Ma, così o così, natura lascia
Poi fare a voi, secondo che v' abbella."*

DANTE. *Paradiso*. 26, 130

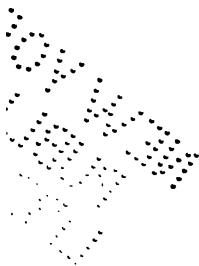
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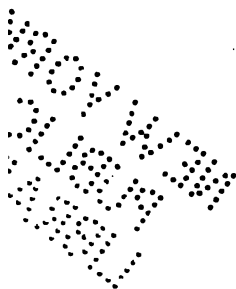
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DEDICATED
TO
THE MEMBERS OF THE UNIVERSITY OF OXFORD,
BOTH RESIDENT AND NON-RESIDENT,
TO WHOM I AM INDEBTED
FOR NUMEROUS PROOFS OF SYMPATHY AND KINDNESS
DURING THE LAST TWELVE YEARS,
IN GRATEFUL ACKNOWLEDGMENT OF THEIR GENEROUS SUPPORT
ON THE
7TH OF DECEMBER, 1860.







PREFACE.

MY Lectures on the Science of Language are here printed as I had prepared them in manuscript for the Royal Institution. When I came to deliver them, a considerable portion of what I had written had to be omitted ; and, in now placing them before the public in a more complete form, I have gladly complied with a wish expressed by many of my hearers. As they are, they only form a short abstract of several Courses delivered from time to time in Oxford, and they do not pretend to be more than an introduction to a science far too comprehensive to be treated successfully in so small a compass.

My object, however, will have been attained, if I should succeed in attracting the attention, not only of the scholar, but of the philosopher, the historian, and the theologian, to a science which concerns them all, and which, though it professes to treat of words only, teaches us that there is more in words than is dreamt of in our philosophy. I quote from Bacon :
“ Men believe that their reason is lord over their



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PREFACE.

words, but it happens, too, that words exercise a reciprocal and reactionary power over our intellect. Words, as a Tartar's bow, shoot back upon the understanding of the wisest, and mightily entangle and pervert the judgment."

MAX MÜLLER.

Oxford, June 11, 1861.

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LECTURES.

LECTURE I.

THE SCIENCE OF LANGUAGE ONE OF THE PHYSICAL SCIENCES.

WHEN I was asked some time ago to deliver a course of lectures on Comparative Philology in this Institution, I at once expressed my readiness to do so. I had lived long enough in England to know that the peculiar difficulties arising from my imperfect knowledge of the language would be more than balanced by the forbearance of an English audience, and I had such perfect faith in my subject that I thought it might be trusted even in the hands of a less skilful expositor. I felt convinced that the researches into the history of languages and into the nature of human speech which have been carried on for the last fifty years in England, France, and Germany, deserved a larger share of public sympathy than they had hitherto received; and it seemed to me, as far as I could judge, that the discoveries in this newly-opened mine of scientific inquiry were not inferior, whether in novelty or importance, to the most brilliant discoveries of our age.



It was not till I began to write my lectures that I became aware of the difficulties of the task I had undertaken. The dimensions of the science of language are so vast that it is impossible in a course of nine lectures to give more than a very general survey of it; and as one of the greatest charms of this science consists in the minuteness of the analysis by which each language, each dialect, each word, each grammatical form is tested, I felt that it was almost impossible to do full justice to my subject, or to place the achievements of those who founded and fostered the science of language in their true light. Another difficulty arises from the dryness of many of the problems which I shall have to discuss. Declensions and conjugations cannot be made amusing, nor can I avail myself of the advantages possessed by most lecturers, who enliven their discussions by experiments and diagrams. If, with all these difficulties and drawbacks, I do not shrink from opening to-day this course of lectures on mere words, on nouns and verbs and particles, — if I venture to address an audience accustomed to listen, in this place, to the wonderful tales of the natural historian, the chemist, and geologist, and wont to see the novel results of inductive reasoning invested by native eloquence, with all the charms of poetry and romance, — it is because, though mistrusting myself, I cannot mistrust my subject. The study of words may be tedious to the school-boy, as breaking of stones is to the wayside laborer; but to the thoughtful eye of the geologist these stones are full of interest; — he sees miracles on the high-road, and reads chronicles in every ditch. Language, too, has marvels of her own, which she unveils to the inquiring glance of the patient

student. There are chronicles below her surface; there are sermons in every word. Language has been called sacred ground, because it is the deposit of thought. We cannot tell as yet what language is. It may be a production of nature, a work of human art, or a divine gift. But to whatever sphere it belongs, it would seem to stand unsurpassed — nay, unequalled in it — by anything else. If it be a production of nature, it is her last and crowning production which she reserved for man alone. If it be a work of human art, it would seem to lift the human artist almost to the level of a divine creator. If it be the gift of God, it is God's greatest gift; for through it God spake to man and man speaks to God in worship, prayer, and meditation.

Although the way which is before us may be long and tedious, the point to which it tends would seem to be full of interest; and I believe I may promise that the view opened before our eyes from the summit of our science, will fully repay the patient travellers, and perhaps secure a free pardon to their venturous guide.

The Science of Language is a science of very modern date. We cannot trace its lineage much beyond the beginning of our century, and it is scarcely received as yet on a footing of equality by the elder branches of learning. Its very name is still unsettled, and the various titles that have been given to it in England, France, and Germany are so vague and varying that they have led to the most confused ideas among the public at large as to the real objects of this new science. We hear it spoken of as Comparative Philology, Scientific Etymology, Phonology, and Glos-

sology. In France it has received the convenient, but somewhat barbarous, name of *Linguistique*. If we must have a Greek title for our science, we might derive it either from *mythos*, word, or from *logos*, speech. But the title of *Mythology* is already occupied, and *Logology* would jar too much on classical ears. We need not waste our time in criticising these names, as none of them has as yet received that universal sanction which belongs to the titles of other modern sciences, such as Geology or Comparative Anatomy; nor will there be much difficulty in christening our young science after we have once ascertained its birth, its parentage, and its character. I myself prefer the simple designation of the Science of Language, though in these days of high-sounding titles, this plain name will hardly meet with general acceptance.

From the name we now turn to the meaning of our science. But before we enter upon a definition of its subject-matter, and determine the method which ought to be followed in our researches, it will be useful to cast a glance at the history of the other sciences, among which the science of language now, for the first time, claims her place; and examine their origin, their gradual progress, and definite settlement. The history of a science is, as it were, its biography, and as we buy experience cheapest in studying the lives of others, we may, perhaps, guard our young science from some of the follies and extravagances inherent in youth by learning a lesson for which other branches of human knowledge have had to pay more dearly.

There is a certain uniformity in the history of most

sciences. If we read such works as Whewell's *History of the Inductive Sciences* or Humboldt's *Cosmos*, we find that the origin, the progress, the causes of failure and success have been the same for almost every branch of human knowledge. There are three marked periods or stages in the history of every one of them, which we may call the *Empirical*, the *Classificatory*, and the *Theoretical*. However humiliating it may sound, every one of our sciences, however grand their present titles, can be traced back to the most humble and homely occupations of half-savage tribes. It was not the true, the good, and the beautiful which spurred the early philosophers to deep researches and bold discoveries. The foundation-stone of the most glorious structures of human ingenuity in ages to come was supplied by the pressing wants of a patriarchal and semi-barbarous society. The names of some of the most ancient departments of human knowledge tell their own tale. Geometry, which at present declares itself free from all sensuous impressions, and treats of its points and lines and planes as purely ideal conceptions, not to be confounded with those coarse and imperfect representations as they appear on paper to the human eye; geometry, as its very name declares, began with measuring a garden or a field. It is derived from the Greek *gē*, land, ground, earth, and *metron*, measure. Botany, the science of plants, was originally the science of *botanē*, which in Greek does not mean a plant in general, but fodder, from *boskein*, to feed. The science of plants would have been called *Phytology*, from the Greek *phyton*, a plant.¹ The founders

¹ See Jessen, *Was heisst Botanik?* 1861.

of Astronomy were not the poet or the philosopher, but the sailor and the farmer. The early poet may have admired "the mazy dance of planets," and the philosopher may have speculated on the heavenly harmonies; but it was to the sailor alone that a knowledge of the glittering guides of heaven became a question of life and death. It was he who calculated their risings and settings with the accuracy of a merchant and the shrewdness of an adventurer; and the names that were given to single stars or constellations clearly show that they were invented by the ploughers of the sea and of the land. The moon, for instance, the golden hand on the dark dial of heaven, was called by them the Measurer, — the measurer of time; for time was measured by nights, and moons, and winters, long before it was reckoned by days, and suns, and years. Moon¹ is a very old word. It was *móna* in Anglo-Saxon, and was used there, not as a feminine, but as a masculine; for the moon was a masculine in all Teutonic languages, and it is only through the influence of classical models that in English moon has been changed into a feminine, and sun into a masculine. It was a most unlucky assertion which Mr. Harris made in his *Hermes*, that all nations ascribe to the sun a masculine, and to the moon a feminine gender.² In Gothic moon is *mena*, which is a masculine. For month we have in A.-S. *mónaðh*, in Gothic *menoth*, both masculine. In Greek we find *mēn*, a masculine, for month, and *mēnē*, a feminine, for moon. In Latin we have the derivative *mensis*, month, and in Sanskrit we find *mās* for moon, and *māsa* for month, both mas-

¹ Kuhn's *Zeitschrift für Vergleichende Sprachforschung*, b. ix. s. 104.

² Horne Tooke, p. 27, *note*.

culine.¹ Now this *mā* in Sanskrit is clearly derived from a root *mā*, to measure, to mete. In Sanskrit, I measure is *mā-mi*; thou measurest, *mā-si*; he measures, *mā-ti* (or *mini-te*). An instrument of measuring is called in Sanskrit *mā-tram*, the Greek *metron*, our metre. Now if the moon was originally called by the farmer the measurer, the ruler of days, and weeks, and seasons, the regulator of the tides, the lord of their festivals, and the herald of their public assemblies, it is but natural that he should have been conceived as a man, and not as the love-sick maiden which our modern sentimental poetry has put in his place.

It was the sailor who, before intrusting his life and goods to the winds and the waves of the ocean, watched for the rising of those stars which he called the Sailing-stars or *Pleiades*, from *plein*, to sail. Navigation in the Greek waters was considered safe after the return of the *Pleiades*; and it closed when they disappeared. The Latin name for the *Pleiades* is *Vergilæ*, from *virga*, a sprout or twig. This name was given to them by the Italian husbandman, because in Italy, where they became visible about May, they marked the return of summer.² Another constellation, the seven stars in the head of Taurus, received the name of *Hyades* or *Pluvie* in Latin, because at the time when they rose with the sun they were supposed to announce rain. The astronomer retains these and many other names; he still speaks of the pole of heaven, of wandering and fixed stars,³ but he is apt

¹ See Curtius, *Griechische Etymologie*, s. 297.

² Ideler, *Handbuch der Chronologie*, b. i. s. 241, 242.

³ As early as the times of Anaximenes of the Ionic, and Alcmaeon of the Pythagorean, schools, the stars had been divided into travelling (*ἀστὲρ*

to forget that these terms were not the result of scientific observation and classification, but were borrowed from the language of those who themselves were wanderers on the sea or in the desert, and to whom the fixed stars were in full reality what their name implies, stars driven in and fixed, by which they might hold fast on the deep, as by heavenly anchors.

But although historically we are justified in saying that the first geometrician was a ploughman, the first botanist a gardener, the first mineralogist a miner, it may reasonably be objected that in this early stage a science is hardly a science yet: that measuring a field is not geometry, that growing cabbages is very far from botany, and that a butcher has no claim to the title of comparative anatomist. This is perfectly true, yet it is but right that each science should be reminded of these its more humble beginnings, and of the practical requirements which it was originally intended to answer. A science, as Bacon says, should be a rich storehouse for the glory of God, and the relief of man's estate. Now, although it may seem as if in the present high state of our society students were enabled to devote their time to the investigation of the facts and laws of nature, or to the contemplation of the mysteries of the world of thought, without any side-glance at the practical result of their labors, no science and no art have long prospered and flourished among us, unless they were in some way subservient to the practical interests of society. It is true that a

πλανώμενα or πλανητά), and non-travelling stars (ἀπλανεῖς ἀστέρες, or ἀπλανῆ ἄστρα). Aristotle first used ἄστρα ἐνδεδεμένα, or fixed stars. (See Humboldt, *Cosmos*, vol. iii. p. 28.) Πόλος, the pivot, hinge, or the pole of the heaven.

Lyell collects and arranges, a Faraday weighs and analyzes, an Owen dissects and compares, a Herschel observes and calculates, without any thought of the immediate marketable results of their labors. But there is a general interest which supports and enlivens their researches, and that interest depends on the practical advantages which society at large derives from their scientific studies. Let it be known that the successive strata of the geologist are a deception to the miner, that the astronomical tables are useless to the navigator, that chemistry is nothing but an expensive amusement, of no use to the manufacturer and the farmer — and astronomy, chemistry, and geology would soon share the fate of alchemy and astrology. As long as the Egyptian science excited the hopes of the invalid by mysterious prescriptions (I may observe by the way that the hieroglyphic signs of our modern prescriptions have been traced back by Champollion to the real hieroglyphics of Egypt¹) — and as long as it instigated the avarice of its patrons by the promise of the discovery of gold, it enjoyed a liberal support at the courts of princes, and under the roofs of monasteries. Though alchemy did not lead to the discovery of gold, it prepared the way to discoveries more valuable. The same with astrology. Astrology was not such mere imposition as it is generally supposed to have been. It is counted as a science by so sound and sober a scholar as Melancthon, and even Bacon allows it a place among the sciences, though admitting that “it had better intelligence and confederacy with the imagination of man than with his reason.” In spite of the strong condemnation which Luther pronounced against astrology,

¹ Bunsen's *Egypt*, vol. iv. p. 108.

astrology continued to sway the destinies of Europe ; and a hundred years after Luther, the astrologer was the counsellor of princes and generals, while the founder of modern astronomy died in poverty and despair. In our time the very rudiments of astrology are lost and forgotten.¹ Even real and useful arts, as soon as they cease to be useful, die away, and their secrets are sometimes lost beyond the hope of recovery. When after the Reformation our churches and chapels were divested of their artistic ornaments, in order to restore, in outward appearance also, the simplicity and purity of the Christian church, the colors of the painted windows began to fade away, and have never regained their former depth and harmony. The invention of printing gave the death-blow to the art of ornamental writing and of miniature-painting employed in the illumination of manuscripts ; and the best artists of the present day despair of rivalling the minuteness, softness, and brilliancy combined by the humble manufacturer of the mediæval missal.

I speak somewhat feelingly on the necessity that every science should answer some practical purpose, because I am aware that the science of language has but little to offer to the utilitarian spirit of our age. It does not profess to help us in learning languages more expeditiously, nor does it hold out any hope of ever realizing the dream of one universal language.

¹ According to a writer in "Notes and Queries" (2d Series, vol. x. p. 500,) astrology is not so entirely extinct as we suppose. "One of our principal writers," he states, "one of our leading barristers, and several members of the various antiquarian societies, are practised astrologers at this hour. But no one cares to let his studies be known, so great is the prejudice that confounds an art requiring the highest education with the jargon of the gypsy fortune-teller."

It simply professes to teach what language is, and this would hardly seem sufficient to secure for a new science the sympathy and support of the public at large. There are problems, however, which, though apparently of an abstruse and merely speculative character, have exercised a powerful influence for good or evil in the history of mankind. Men before now have fought for an idea, and have laid down their lives for a word ; and many of these problems which have agitated the world from the earliest to our own times, belong properly to the science of language.

Mythology, which was the bane of the ancient world, is in truth a disease of language. A myth means a word, but a word which, from being a name or an attribute, has been allowed to assume a more substantial existence. Most of the Greek, the Roman, the Indian, and other heathen gods are nothing but poetical names, which were gradually allowed to assume a divine personality never contemplated by their original inventors. *Eos* was a name of the dawn before she became a goddess, the wife of *Tithonos*, or the dying day. *Fatum*, or fate, meant originally what had been spoken ; and before Fate became a power, even greater than Jupiter, it meant that which had once been spoken by Jupiter, and could never be changed, — not even by Jupiter himself. *Zeus* originally meant the bright heaven, in Sanskrit *Dyaus* ; and many of the stories told of him as the supreme god, had a meaning only as told originally of the bright heaven, whose rays, like golden rain, descend on the lap of the earth, the *Danae* of old, kept by her father in the dark prison of winter. No one doubts that *Luna* was simply a name of the moon ; but so was likewise *Lucina*, both derived

from *lucere*, to shine. *Hecate*, too, was an old name of the moon, the feminine of *Hekatos* and *Hekatebolos*, the far-darting sun; and *Pyrrha*, the Eve of the Greeks, was nothing but a name of the red earth, and in particular of Thessaly. This mythological disease, though less virulent in modern languages, is by no means extinct.

During the Middle Ages the controversy between Nominalism and Realism, which agitated the church for centuries, and finally prepared the way for the Reformation, was again, as its very name shows, a controversy on names, on the nature of language, and on the relation of words to our conceptions on one side, and to the realities of the outer world on the other. Men were called heretics for believing that words such as *justice* or *truth* expressed only conceptions of our mind, not real things walking about in broad daylight.

In modern times the science of language has been called in to settle some of the most perplexing political and social questions. "Nations and languages against dynasties and treaties," this is what has remodelled, and will remodel still more, the map of Europe; and in America comparative philologists have been encouraged to prove the impossibility of a common origin of languages and races, in order to justify, by scientific arguments, the unhallowed theory of slavery. Never do I remember to have seen science more degraded than on the title-page of an American publication in which, among the profiles of the different races of man, the profile of the ape was made to look more human than that of the negro.

Lastly, the problem of the position of man on the

threshold between the worlds of matter and spirit has of late assumed a very marked prominence among the problems of the physical and mental sciences. It has absorbed the thoughts of men who, after a long life spent in collecting, observing, and analyzing, have brought to its solution qualifications unrivalled in any previous age; and if we may judge from the greater warmth displayed in discussions ordinarily conducted with the calmness of judges and not with the passion of pleaders, it might seem, after all, as if the great problems of our being, of the true nobility of our blood, of our descent from heaven or earth, though unconnected with anything that is commonly called practical, have still retained a charm of their own — a charm that will never lose its power on the mind, and on the heart of man. Now, however much the frontiers of the animal kingdom have been pushed forward, so that at one time the line of demarcation between animal and man seemed to depend on a mere fold in the brain, there is *one* barrier which no one has yet ventured to touch — the barrier of language. Even those philosophers with whom *penser c'est sentir*,¹ who reduce all thought to feeling, and maintain that we share the faculties which are the productive causes of thought in common with beasts, are bound to confess that *as yet* no race of animals has produced a language. Lord Monboddo, for instance, admits that as yet no

¹ "Man has two faculties, or two passive powers, the existence of which is generally acknowledged; 1, the faculty of receiving the different impressions caused by external objects, physical sensibility; and 2, the faculty of preserving the impressions caused by these objects, called memory, or weakened sensation. These faculties, the productive causes of thought, we have in common with beasts. . . . Everything is reducible to feeling." — *Helvetius*.

animal has been discovered in the possession of language, "not even the beaver, who of all the animals we know, that are not, like the orang-outangs, of our own species, comes nearest to us in sagacity."

Locke, who is generally classed together with these materialistic philosophers, and who certainly vindicated a large share of what had been claimed for the intellect as the property of the senses, recognized most fully the barrier which language, as such, placed between man and brutes. "This I may be positive in," he writes, "that the power of abstracting is not at all in brutes, and that the having of general ideas is that which puts a perfect distinction between man and brutes. For it is evident we observe no footsteps in these of making use of general signs for universal ideas; from which we have reason to imagine that they have not the faculty of abstracting or making general ideas, since they have no use of *words* or any other general signs."

If, therefore, the science of language gives us an insight into that which, by common consent, distinguishes man from all other living beings; if it establishes a frontier between man and the brute, which can never be removed, it would seem to possess at the present moment peculiar claims on the attention of all who, while watching with sincere admiration the progress of comparative physiology, yet consider it their duty to enter their manly protest against a revival of the shallow theories of Lord Monboddo.

But to return to our survey of the history of the physical sciences. We had examined the empirical stage through which every science has to pass. We saw that, for instance, in botany, a man who has

travelled through distant countries, who has collected a vast number of plants, who knows their names, their peculiarities, and their medicinal qualities, is not yet a botanist, but only a herbalist, a lover of plants, or what the Italians call a *dilettante*, from *dilettare*, to delight. The real science of plants, like every other science, begins with the work of classification. An empirical acquaintance with facts rises to a scientific knowledge of facts as soon as the mind discovers beneath the multiplicity of single productions the unity of an organic system. This discovery is made by means of comparison and classification. We cease to study each flower for its own sake; and by continually enlarging the sphere of our observation, we try to discover what is common to many and offers those essential points on which groups or natural classes may be established. These classes again, in their more general features, are mutually compared; new points of difference, or of similarity of a more general and higher character, spring to view, and enable us to discover classes of classes, or families. And when the whole kingdom of plants has thus been surveyed, and a simple tissue of names been thrown over the garden of nature; when we can lift it up, as it were, and view it in our mind as a whole, as a system well defined and complete, we then speak of the science of plants, or botany. We have entered into altogether a new sphere of knowledge where the individual is subject to the general, fact to law; we discover thought, order, and purpose pervading the whole realm of nature, and we perceive the dark chaos of matter lighted up by the reflection of a divine mind. Such views may be right or wrong.



Too hasty comparisons, or too narrow distinctions, may have prevented the eye of the observer from discovering the broad outlines of nature's plan. Yet every system, however insufficient it may prove hereafter, is a step in advance. If the mind of man is once impressed with the conviction that there must be order and law everywhere, it never rests again until all that seems irregular has been eliminated, until the full beauty and harmony of nature has been perceived, and the eye of man has caught the eye of God beaming out from the midst of all His works. The failures of the past prepare the triumphs of the future.

Thus, to recur to our former illustration, the systematic arrangement of plants which bears the name of Linnæus, and which is founded on the number and character of the reproductive organs, failed to bring out the natural order which pervades all that grows and blossoms. Broad lines of demarcation which unite or divide large tribes and families of plants were invisible from his point of view. But in spite of this, his work was not in vain. The fact that plants in every part of the world belonged to one great system was established once for all; and even in later systems most of his classes and divisions have been preserved, because the conformation of the reproductive organs of plants happened to run parallel with other more characteristic marks of true affinity.¹ It is the same in the history of astronomy. Although the Ptolemæan system was a wrong one, yet even from its ec-

¹ "The generative organs being those which are most remotely related to the habits and food of an animal, I have always regarded as affording very clear indications of its true affinities." — *Owen, as quoted by Darwin, Origin of Species*, p. 414.

centric point of view, laws were discovered determining the true movements of the heavenly bodies. The conviction that there remains something unexplained is sure to lead to the discovery of our error. There can be no error in nature ; the error must be with us. This conviction lived in the heart of Aristotle when, in spite of his imperfect knowledge of nature, he declared " that there is in nature nothing interpolated or without connection, as in a bad tragedy ; " and from his time forward every new fact and every new system have confirmed his faith.

The object of classification is clear. We understand things if we can comprehend them ; that is to say, if we can grasp and hold together single facts, connect isolated impressions, distinguish between what is essential and what is merely accidental, and thus predicate the general of the individual, and class the individual under the general. This is the secret of all scientific knowledge. Many sciences, while passing through this second or classificatory stage, assume the title of comparative. When the anatomist has finished the dissection of numerous bodies, when he has given names to each organ, and discovered the distinctive functions of each, he is led to perceive similarity where at first he saw dissimilarity only. He discovers in the lower animals rudimentary indications of the more perfect organization of the higher ; and he becomes impressed with the conviction that there is in the animal kingdom the same order and purpose which pervades the endless variety of plants or any other realm of nature. He learns, if he did not know it before, that things were not created at random or in a lump, but that there is a scale which leads, by imperceptible degrees, from the

lowest infusoria to the crowning work of nature, — man ; that all is the manifestation of one and the same unbroken chain of creative thought, the work of one and the same all-wise Creator.

In this way the second or classificatory leads us naturally to the third or final stage — the theoretical, or metaphysical. If the work of classification is properly carried out, it teaches us that nothing exists in nature by accident ; that each individual belongs to a species, each species to a genus ; and that there are laws which underlie the apparent freedom and variety of all created things. These laws indicate to us the presence of a purpose in the mind of the Creator ; and whereas the material world was looked upon by ancient philosophers as a mere illusion, as an agglomerate of atoms, or as the work of an evil principle, we now read and interpret its pages as the revelation of a divine power, and wisdom, and love. This has given to the study of nature a new character. After the observer has collected his facts, and after the classifier has placed them in order, the student asks what is the origin and what is the meaning of all this ? and he tries to soar, by means of induction, or sometimes even of divination, into regions not accessible to the mere collector. In this attempt the mind of man no doubt has frequently met with the fate of Phaeton ; but, undismayed by failure, he asks again and again for his father's steeds. It has been said that this so-called philosophy of nature has never achieved anything ; that it has done nothing but prove that things must be exactly as they had been found to be by the observer and collector. Physical science, however, would never have been what it is without the impulses which

it received from the philosopher, nay even from the poet. "At the limits of exact knowledge" (I quote the words of Humboldt), "as from a lofty island-shore, the eye loves to glance towards distant regions. The images which it sees may be illusive; but, like the illusive images which people imagined they had seen from the Canaries or the Azores, long before the time of Columbus, they may lead to the discovery of a new world."

Copernicus, in the dedication of his work to Pope Paul III. (it was commenced in 1517, finished 1530, published 1543), confesses that he was brought to the discovery of the sun's central position, and of the diurnal motion of the earth, not by observation or analysis, but by what he calls the feeling of a want of symmetry in the Ptolemaic system. But who had told him that there *must* be symmetry in all the movements of the celestial bodies, or that complication was not more sublime than simplicity? Symmetry and simplicity, before they were discovered by the observer, were postulated by the philosopher. The first idea of revolutionizing the heavens was suggested to Copernicus, as he tells us himself, by an ancient Greek philosopher, by Philolaus, the Pythagorean. No doubt with Philolaus the motion of the earth was only a guess, or, if you like, a happy intuition. Nevertheless, if we may trust the words of Copernicus, it is quite possible that without that guess we should never have heard of the Copernican system. Truth is not found by addition and multiplication only. When speaking of Kepler, whose method of reasoning has been considered as unsafe and fantastic by his contemporaries as well as by later astronomers, Sir David Brewster remarks very

truly, "that, as an instrument of research, the influence of imagination has been much overlooked by those who have ventured to give laws to philosophy." The torch of imagination is as necessary to him who looks for truth, as the lamp of study. Kepler held both, and more than that, he had the star of faith to guide him in all things from darkness to light.

In the history of the physical sciences, the three stages which we have just described as the empirical, the classificatory, and the theoretical, appear generally in chronological order. I say, generally, for there have been instances, as in the case just quoted of Philolaus, where the results properly belonging to the third have been anticipated in the first stage. To the quick eye of genius one case may be like a thousand, and one experiment, well chosen, may lead to the discovery of an absolute law. Besides, there are great chasms in the history of science. The tradition of generations is broken by political or ethnic earthquakes, and the work that was nearly finished has frequently had to be done again from the beginning, when a new surface had been formed for the growth of a new civilization. The succession, however, of these three stages is no doubt the natural one, and it is very properly observed in the study of every science. The student of botany begins as a collector of plants. Taking each plant by itself, he observes its peculiar character, its habitat, its proper season, its popular or unscientific name. He learns to distinguish between the roots, the stem, the leaves, the flower, the calyx, the stamina, and pistils. He learns, so to say, the practical grammar of the plant before he can begin to compare, to arrange, and classify.

Again, no one can enter with advantage on the third stage of any physical science without having passed through the second. No one can study *the plant*, no one can understand the bearing of such a work as, for instance, Professor Schleiden's "*Life of the Plant*,"¹ who has not studied the life of plants in the wonderful variety, and in the still more wonderful order, of nature. These last and highest achievements of inductive philosophy are possible only after the way has been cleared by previous classification. The philosopher must command his classes like regiments which obey the order of their general. Thus alone can the battle be fought and truth be conquered.

After this rapid glance at the history of the other physical sciences, we now return to our own, the science of language, in order to see whether it really is a science, and whether it can be brought back to the standard of the inductive sciences. We want to know whether it has passed, or is still passing, through the three phases of physical research; whether its progress has been systematic or desultory, whether its method has been appropriate or not. But before we do this, we shall, I think, have to do something else. You may have observed that I always took it for granted that the science of language, which is best known in this country by the name of comparative philology, is one of the physical sciences, and that therefore its method ought to be the same as that which has been followed with so much success in botany, geology, anatomy, and other branches of the study of nature. In the history of the physical sciences, however, we look in vain for a place assigned to comparative philology, and

¹ *Die Pflanze und ihr Leben*, von M. T. Schleiden. Leipzig, 1858.

its very name would seem to show that it belongs to quite a different sphere of human knowledge. There are two great divisions of human knowledge, which, according to their subject-matter, are called *physical* and *historical*. Physical science deals with the works of God, historical science with the works of man. Now if we were to judge by its name, comparative philology, like classical philology, would seem to take rank, not as a physical, but as an historical science, and the proper method to be applied to it would be that which is followed in the history of art, of law, of politics, and religion. However, the title of comparative philology must not be allowed to mislead us. It is difficult to say by whom that title was invented; but all that can be said in defence of it is, that the founders of the science of language were chiefly scholars or philologists, and that they based their inquiries into the nature and laws of language on a comparison of as many facts as they could collect within their own special spheres of study. Neither in Germany, which may well be called the birthplace of this science, nor in France, where it has been cultivated with brilliant success, has that title been adopted. It will not be difficult to show that, although the science of language owes much to the classical scholar, and though in return it has proved of great use to him, yet comparative philology has really nothing whatever in common with philology in the usual meaning of the word. Philology, whether classical or oriental, whether treating of ancient or modern, of cultivated or barbarous languages, is an historical science. Language is here treated simply as a means. The classical scholar uses Greek or Latin, the oriental scholar Hebrew or San-

skrit, or any other language, as a key to an understanding of the literary monuments which by-gone ages have bequeathed to us, as a spell to raise from the tomb of time the thoughts of great men in different ages and different countries, and as a means ultimately to trace the social, moral, intellectual, and religious progress of the human race. In the same manner, if we study living languages, it is not for their own sake that we acquire grammars and vocabularies. We do so on account of their practical usefulness. We use them as letters of introduction to the best society or to the best literature of the leading nations of Europe. In comparative philology the case is totally different. In the science of language, languages are not treated as a means; language itself becomes the sole object of scientific inquiry. Dialects which have never produced any literature at all, the jargons of savage tribes, the clicks of the Hottentots, and the vocal modulations of the Indo-Chinese are as important, nay, for the solution of some of our problems, more important, than the poetry of Homer, or the prose of Cicero. We do not want to know languages, we want to know language; what language is, how it can form a vehicle or an organ of thought; we want to know its origin, its nature, its laws; and it is only in order to arrive at that knowledge that we collect, arrange, and classify all the facts of language that are within our reach.

And here I must protest, at the very outset of these lectures, against the supposition that the student of language must necessarily be a great linguist. I shall have to speak to you in the course of these lectures of hundreds of languages, some of which, perhaps, you may never have heard mentioned even by name. Do

not suppose that I know these languages as you know Greek or Latin, French or German. In that sense I know indeed very few languages, and I never aspired to the fame of a Mithridates or a Mezzofanti. It is impossible for a student of language to acquire a practical knowledge of all tongues with which he has to deal. He does not wish to speak the Kachikal language, of which a professorship was lately founded in the University of Guatemala,¹ or to acquire the elegancies of the idiom of the Tcheremissians; nor is it his ambition to explore the literature of the Samoyedes, or the New-Zealanders. It is the grammar and the dictionary which form the subject of his inquiries. These he consults and subjects to a careful analysis, but he does not encumber his memory with paradigms of nouns and verbs, or with long lists of words which have never been used in any work of literature. It is true, no doubt, that no language will unveil the whole of its wonderful structure except to the scholar who has studied it thoroughly and critically in a number of literary works representing the various periods of its growth. Nevertheless, short lists of vocables, and imperfect sketches of a grammar, are in many instances all that the student can expect to obtain, or can hope to master and to use for the purposes he has in view. He must learn to make the best of this fragmentary information, like the comparative anatomist, who frequently learns his lessons from the smallest fragments of fossil bones, or the vague pictures of animals brought home by unscientific travellers. If it were necessary for the comparative philologist to acquire a critical or practical acquaintance with all the

¹ Sir J. Stoddart, *Glossology*, p. 22.

languages which form the subject of his inquiries, the science of language would simply be an impossibility. But we do not expect the botanist to be an experienced gardener, or the geologist a miner, or the ichthyologist a practical fisherman. Nor would it be reasonable to object in the science of language to the same division of labor which is necessary for the successful cultivation of subjects much less comprehensive. Though much of what we might call the realm of language is lost to us forever, though whole periods in the history of language are by necessity withdrawn from our observation, yet the mass of human speech that lies before us, whether in the petrified strata of ancient literature or in the countless variety of living languages and dialects, offers a field as large, if not larger, than any other branch of physical research. It is impossible to fix the exact number of known languages, but their number can hardly be less than nine hundred. That this vast field should never have excited the curiosity of the natural philosopher before the beginning of our century may seem surprising, more surprising even than the indifference with which former generations treated the lessons which even the stones seemed to teach of the life still throbbing in the veins and on the very surface of the earth. The saying that "familiarity breeds contempt" would seem applicable to the subjects of both these sciences. The gravel of our walks hardly seemed to deserve a scientific treatment, and the language which every plough-boy can speak could not be raised without an effort to the dignity of a scientific problem. Man had studied every part of nature, the mineral treasures in the bowels of the earth, the flowers of each season, the

animals of every continent, the laws of storms, and the movements of the heavenly bodies ; he had analyzed every substance, dissected every organism, he knew every bone and muscle, every nerve and fibre of his own body to the ultimate elements which compose his flesh and blood ; he had meditated on the nature of his soul, on the laws of his mind, and tried to penetrate into the last causes of all being — and yet language, without the aid of which not even the first step in this glorious career could have been made, remained unnoticed. Like a veil that hung too close over the eye of the human mind, it was hardly perceived. In an age when the study of antiquity attracted the most energetic minds, when the ashes of Pompeii were sifted for the playthings of Roman life ; when parchments were made to disclose, by chemical means, the erased thoughts of Grecian thinkers ; when the tombs of Egypt were ransacked for their sacred contents, and the palaces of Babylon and Nineveh forced to surrender the clay diaries of Nebuchadnezzar ; when everything, in fact, that seemed to contain a vestige of the early life of man was anxiously searched for and carefully preserved in our libraries and museums, — language, which in itself carries us back far beyond the cuneiform literature of Assyria and Babylonia, and the hieroglyphic documents of Egypt ; which connects ourselves, through an unbroken chain of speech, with the very ancestors of our race, and still draws its life from the first utterances of the human mind, — language, the living and speaking witness of the whole history of our race, was never cross-examined by the student of history, was never made to disclose its secrets until questioned and, so to say, brought back to itself within

the last fifty years, by the genius of a Humboldt, Bopp, Grimm, Bunsen, and others. If you consider that, whatever view we take of the origin and dispersion of language, nothing new has ever been added to the substance of language, that all its changes have been changes of form, that no new root or radical has ever been invented by later generations, as little as one single element has ever been added to the material world in which we live; if you bear in mind that in one sense, and in a very just sense, we may be said to handle the very words which issued from the mouth of the son of God, when he gave names to "all cattle, and to the fowl of the air, and to every beast of the field," you will see, I believe, that the science of language has claims on your attention, such as few sciences can rival or excel.

Having thus explained the manner in which I intend to treat the science of language, I hope in my next lecture to examine the objections of those philosophers who see in language nothing but a contrivance devised by human skill for the more expeditious communication of our thoughts, and who would wish to see it treated, not as a production of nature, but as a work of human art.



LECTURE II.

THE GROWTH OF LANGUAGE IN CONTRADISTINCTION TO THE HISTORY OF LANGUAGE.

IN claiming for the science of language a place among the physical sciences, I was prepared to meet with many objections. The circle of the physical sciences seemed closed, and it was not likely that a new claimant should at once be welcomed among the established branches and scions of the ancient aristocracy of learning.¹

¹ Dr. Whewell classes the science of language as one of the palaitiological sciences; but he makes a distinction between palaitiological sciences treating of material things, for instance, geology, and others respecting the products which result from man's imaginative and social endowments, for instance, comparative philology. He excludes the latter from the circle of the physical sciences, properly so called, but he adds: "We began our inquiry with the trust that any sound views which we should be able to obtain respecting the nature of truth in the physical sciences, and the mode of discovering it, must also tend to throw light upon the nature and prospects of knowledge of all other kinds; — must be useful to us in moral, political, and philological researches. We stated this as a confident anticipation; and the evidence of the justice of our belief already begins to appear. We have seen that biology leads us to psychology, if we choose to follow the path; and thus the passage from the material to the immaterial has already unfolded itself at one point; and we now perceive that there are several large provinces of speculation which concern subjects belonging to man's immaterial nature, and which are governed by the same laws as sciences altogether physical. It is not our business to dwell on the prospects which our philosophy thus opens to our contemplation; but we may allow ourselves, in this last stage of our pilgrimage among the foundations of the physical sciences, to be cheered and animated by the ray that thus beams upon us, however dimly, from a higher and brighter region." — *Indications of the Creator*, p. 148.

The first objection which was sure to be raised on the part of such sciences as botany, geology, or physiology is this:—Language is the work of man; it was invented by man as a means of communicating his thoughts, when mere looks and gestures proved inefficient; and it was gradually, by the combined efforts of succeeding generations, brought to that perfection which we admire in the idiom of the Bible, the Vedas, the Koran, and in the poetry of Homer, Virgil, Dante, and Shakespeare. Now it is perfectly true that if language be the work of man, in the same sense in which a statue, or a temple, or a poem, or a law are properly called the works of man, the science of language would have to be classed as an historical science. We should have a history of language as we have a history of art, of poetry, and of jurisprudence, but we could not claim for it a place side by side with the various branches of Natural History. It is true, also, that if you consult the works of the most distinguished modern philosophers you will find that whenever they speak of language, they take it for granted that language is a human invention, that words are artificial signs, and that the varieties of human speech arose from different nations agreeing on different sounds as the most appropriate signs of their different ideas. This view of the origin of language was so powerfully advocated by the leading philosophers of the last century, that it has retained an undisputed currency even among those who, on almost every other point, are strongly opposed to the teaching of that school. A few voices, indeed, have been raised to protest against the theory of language being originally invented by man. But they, in their zeal to vindicate

the divine origin of language, seem to have been carried away so far as to run counter to the express statements of the Bible. For in the Bible it is not the Creator who gives names to all things, but Adam. "Out of the ground," we read, "the Lord God formed every beast of the field, and every fowl of the air; and brought them unto Adam to see what he would call them: and whatsoever Adam called every living creature, that was the name thereof."¹ But with the exception of this small class of philosophers, more orthodox even than the Bible,² the generally received opinion on the origin of language is that which was held by *Locke*, which was powerfully advocated by *Adam Smith* in his *Essay on the Origin of Language*, appended to his *Treatise on Moral Sentiments*, and which was adopted with slight modifications by *Dugald Stewart*. According to them, man must have lived for a time in a state of mutism, his only means of communication consisting in gestures of the body, and in the changes of countenance, till at last, when ideas multiplied that could no longer be pointed at with the fingers, "they found it necessary to invent artificial signs of which the meaning was

¹ Gen. ii. 19.

² St. Basil was accused by Eunomius of denying Divine Providence, because he would not admit that God had created the names of all things, but ascribed the invention of language to the faculties which God had implanted in man. St. Gregory, bishop of Nyssa in Cappadocia (331-396), defended St. Basil. "Though God has given to human nature its faculties," he writes, "it does not follow that therefore He produces all the actions which we perform. He has given us the faculty of building a house and doing any other work; but we surely are the builders, and not He. In the same manner our faculty of speaking is the work of Him who has so framed our nature; but the invention of words for naming each object is the work of our mind." See Ladevi-Roche, *De l'Origine du Langage*: Bordeaux, 1860, p. 14. Also, Horne Tooke, *Diversions of Purley*, p. 19.

fixed by mutual agreement." We need not dwell on minor differences of opinion as to the exact process by which this artificial language is supposed to have been formed. Adam Smith would wish us to believe that the first artificial words were *verbs*. Nouns, he thinks, were of less urgent necessity because things could be pointed at or imitated, whereas mere actions, such as are expressed by verbs, could not. He therefore supposes that when people saw a wolf coming, they pointed at him, and simply cried out, "He comes." Dugald Stewart, on the contrary, thinks that the first artificial words were nouns, and that the verbs were supplied by gesture; that, therefore, when people saw a wolf coming, they did not cry "He comes," but "Wolf, Wolf," leaving the rest to be imagined.¹

But whether the verb or the noun was the first to be invented is of little importance; nor is it possible for us, at the very beginning of our inquiry into the nature of language, to enter upon a minute examination of a theory which represents language as a work of human art, and as established by mutual agreement as a medium of communication. While fully admitting that if this theory were true, the science of language would not come within the pale of the physical sciences, I must content myself for the present with pointing out that no one has yet explained how, without language, a discussion on the merits of each word, such as must necessarily have preceded a mutual agreement, could have been carried on. But as it is the object of these lectures to prove that language is not a work of human art, in the same sense

¹ D. Stewart, Works, vol. iii. p. 27.

as painting, or building, or writing, or printing, I must ask to be allowed, in this preliminary stage, simply to enter my protest against a theory, which, though still taught in the schools, is, nevertheless, I believe, without a single fact to support its truth.

But there are other objections besides this which would seem to bar the admission of the science of language to the circle of the physical sciences. Whatever the origin of language may have been, it has been remarked with a strong appearance of truth, that language has a history of its own, like art, like law, like religion; and that, therefore, the science of language belongs to the circle of the *historical*, or, as they used to be called, the *moral*, in contradistinction to the *physical* sciences. It is a well-known fact, which recent researches have not shaken, that nature is incapable of progress or improvement. The flower which the botanist observes to-day was as perfect from the beginning. Animals, which are endowed with what is called an artistic instinct, have never brought that instinct to a higher degree of perfection. The hexagonal cells of the bee are not more regular in the nineteenth century than at any earlier period, and the gift of song has never, as far as we know, been brought to a higher perfection by our nightingale than by the Philomele of the Greeks. "Natural History," to quote Dr. Whewell's words,¹ "when systematically treated, excludes all that is historical, for it classes objects by their permanent and universal properties, and has nothing to do with the narration of particular or casual facts." Now, if we consider the large number of tongues spoken in different parts of

¹ History of Inductive Sciences, vol. iii. p. 531.

the world with all their dialectic and provincial varieties, if we observe the great changes which each of these tongues has undergone in the course of centuries, how Latin was changed into Italian, Spanish, Portuguese, Provençal, French, Wallachian, and Roumansch; how Latin again, together with Greek, and the Celtic, the Teutonic, and Slavonic languages, together likewise with the ancient dialects of India and Persia, must have sprung from an earlier language, the mother of the whole Indo-European or Aryan family of speech; if we see how Hebrew, Arabic, and Syriac, with several minor dialects, are but different impressions of one and the same common type, and must all have flowed from the same source, the original language of the Semitic race; and if we add to these two, the Aryan and Semitic, at least one more well-established class of languages, the Turanian, comprising the dialects of the nomad races scattered over Central and Northern Asia, the Tungusic, Mongolic, Turkic,¹ Samoyedic, and Finnic, all radii from one common centre of speech: — if we watch this stream of language rolling on through centuries in these three mighty arms, which, before they disappear from our sight in the far distance, clearly show a convergence towards one common source: it would seem, indeed, as if there were an historical life inherent in language, and as if both the will of man and the power of time could tell, if not on its substance, at least on its form. And even if the mere local varieties of speech were not considered sufficient ground for excluding language from the domain of natural science, there would still remain the greater

¹ Names in *ic*, are names of classes as distinct from the names of single languages.



difficulty of reconciling with the recognized principles of physical science the historical changes affecting every one of these varieties. Every part of nature, whether mineral, plant, or animal, is the same in kind from the beginning to the end of its existence, whereas few languages could be recognized as the same after the lapse of but a thousand years. The language of Alfred is so different from the English of the present day that we have to study it in the same manner as we study Greek and Latin. We can read Milton and Bacon, Shakespeare and Hooker; we can make out Wycliffe and Chaucer; but, when we come to the English of the thirteenth century, we can but guess its meaning, and we fail even in this with works previous to the *Ormulum* and *Layamon*. The historical changes of language may be more or less rapid, but they take place at all times and in all countries. They have reduced the rich and powerful idiom of the poets of the Veda to the meagre and impure jargon of the modern Sepoy. They have transformed the language of the *Zend-Avesta* and of the mountain records of *Behistún* into that of *Firdusi* and the modern Persians; the language of *Virgil* into that of *Dante*, the language of *Ulphilas* into that of *Charlemagne*, the language of *Charlemagne* into that of *Goethe*. We have reason to believe that the same changes take place with even greater violence and rapidity in the dialects of savage tribes, although, in the absence of a written literature, it is extremely difficult to obtain trustworthy information. But in the few instances where careful observations have been made on this interesting subject, it has been found that among the wild and illiterate tribes of *Siberia*, *Africa*, and *Siam*, two or three generations are

sufficient to change the whole aspect of their dialects. The languages of highly civilized nations, on the contrary, become more and more stationary, and seem sometimes almost to lose their power of change. Where there is a classical literature, and where its language is spread to every town and village, it seems almost impossible that any further changes should take place. Nevertheless, the language of Rome, for so many centuries the queen of the whole civilized world, was deposed by the modern Romance dialects, and the ancient Greek was supplanted in the end by the modern *Romaic*. And though the art of printing and the wide diffusion of Bibles, and Prayer-books, and newspapers have acted as still more powerful barriers to arrest the constant flow of human speech, we may see that the language of the authorized version of the Bible, though perfectly intelligible, is no longer the spoken language of England. In *Booker's Scripture and Prayer-book Glossary*¹ the number of words or senses of words which have become obsolete since 1611, amount to 388, or nearly one fifteenth part of the whole number of words used in the Bible. Smaller changes, changes of accent and meaning, the reception of new, and the dropping of old words, we may watch as taking place under our own eyes. Rogers² said that "*cóntemplate* is bad enough, but *bálcony* makes me sick," whereas at present no one is startled by *cóntemplate* instead of *con-témplate*, and *bálcony* has become more usual than *bal-cóny*. Thus *Roome* and *chaney*, *layloc* and *goold*, have but lately been driven from the stage by *Rome*, *china*,

¹ *Lectures on the English Language*, by G. P. Marsh: New York, 1860, p. 263 and 630. These lectures embody the result of much careful research, and are full of valuable observations.

² Marsh, p. 532, note.

lilac, and *gold*, and some courteous gentlemen of the old school still continue to be *obleege*d instead of being *obliged*. *Force*,¹ in the sense of a waterfall, and *gill*, in the sense of a rocky ravine, were not used in classical English before Wordsworth. *Handbook*,² though an old Anglo-Saxon word, has but lately taken the place of *manual*, and a number of words such as *cab* for cabriolet, *buss* for omnibus, and even a verb such as *to shunt* tremble still on the boundary line between the vulgar and the literary idioms. Though the grammatical changes that have taken place since the publication of the authorized version are yet fewer in number, still we may point out some. The termination of the third person singular in *th* is now entirely replaced by *s*. No one now says *he liveth*, but only *he lives*. Several of the irregular imperfects and participles have assumed a new form. No one now uses *he spake*, and *he drave*, instead of *he spoke*, and *he drove*; *holpen* is replaced by *helped*; *holden* by *held*; *shapen* by *shaped*. The distinction between *ye* and *you*, the former being reserved for the nominative, the latter for all the other cases, is given up in modern English; and what is apparently a new grammatical form, the possessive pronoun *its*, has sprung into life since the beginning of the seventeenth century. It never occurs in the Bible; and though it is used three or four times by Shakespeare, Ben Jonson does not recognize it as yet in his English Grammar.³

It is argued, therefore, that as language, differing thereby from all other productions of nature, is liable to historical alterations, it is not fit to be treated in the

¹ Marsh, p. 589.

² Sir J. Stoddart, *Glossology*, p. 60.

³ Trench, *English Past and Present*, p. 114; Marsh, p. 397.

same manner as the subject-matter of all the other physical sciences.

There is something very plausible in this objection, but if we examine it more carefully, we shall find that it rests entirely on a confusion of terms. We must distinguish between historical change and natural growth. Art, science, philosophy, and religion all have a history ; language, or any other production of nature, admits only of growth.

Let us consider, first, that although there is a continuous change in language, it is not in the power of man either to produce or to prevent it. We might think as well of changing the laws which control the circulation of our blood, or of adding an inch to our height, as of altering the laws of speech, or inventing new words according to our own pleasure. As man is the lord of nature only if he knows her laws and submits to them, the poet and the philosopher become the lords of language only if they know its laws and obey them.

When the Emperor Tiberius had made a mistake, and was reproved for it by Marcellus, another grammarian of the name of Capito, who happened to be present, remarked that what the emperor said was good Latin, or, if it were not, it would soon be so. Marcellus, more of a grammarian than a courtier, replied, "Capito is a liar ; for, Cæsar, thou canst give the Roman citizenship to men, but not to words." A similar anecdote is told of the German Emperor Sigismund. When presiding at the Council of Costnitz, he addressed the assembly in a Latin speech, exhorting them to eradicate the schism of the Hussites. "Videte Patres," he said, "ut eradicetis schismam Hussitarum." He was very unceremoniously called

to order by a monk, who called out, "Serenissime Rex, schisma est generis neutri."¹ The emperor, however, without losing his presence of mind, asked the impertinent monk, "How do you know it?" The old Bohemian school-master replied, "Alexander Gallus says so." "And who is Alexander Gallus?" the emperor rejoined. The monk replied, "He was a monk." "Well," said the emperor, "and I am Emperor of Rome; and my word, I trust, will be as good as the word of any monk." No doubt the laughs were with the emperor; but for all that, *schisma* remained a neuter, and not even an emperor could change its gender or termination.

The idea that language can be changed and improved by man is by no means a new one. We know that Protagoras, an ancient Greek philosopher, after laying down some laws on gender, actually began to find fault with the text of Homer, because it did not agree with his rules. But here, as in every other instance, the attempt proved unavailing. Try to alter the smallest rule of English, and you will find that it is physically impossible. There is apparently a very small difference between *much* and *very*, but you can hardly ever put one in the place of the other. You can say, "I am very happy," but not "I am much happy," though you may say "I am most happy." On the contrary, you can say "I am much misunderstood," but not "I am very misunderstood." Thus the western Romance dialects, Spanish and Portuguese, to-

¹ As several of my reviewers have found fault with the monk for using the genitive *neutri*, instead of *neutrius*, I beg to refer to Priscianus, l. vi. c. i. and c. vii. The expression *generis neutrius*, though frequently used by modern editors, has no authority, I believe, in ancient Latin.

gether with Wallachian, can only employ the Latin word *magis* for forming comparatives:—Sp. *mas dulce*; Port. *mais doce*; Wall. *mai dulce*: while French, Provençal, and Italian only allow of *plus* for the same purpose: Ital. *più dolce*; Prov. *plus dous*; Fr. *plus doux*. It is by no means impossible, however, that this distinction between *very*, which is now used with adjectives only, and *much*, which precedes participles, should disappear in time. In fact, “very pleased” and “very delighted” are Americanisms which may be heard even in this country. But if that change take place, it will not be by the will of any individual, nor by the mutual agreement of any large number of men, but rather in spite of the exertions of grammarians and academies. And here you perceive the first difference between history and growth. An emperor may change the laws of society, the forms of religion, the rules of art: it is in the power of one generation, or even of one individual, to raise an art to the highest pitch of perfection, while the next may allow it to lapse, till a new genius takes it up again with renewed ardor. In all this we have to deal with the conscious acts of individuals, and we therefore move on historical ground. If we compare the creations of Michael Angelo or Raphael with the statues and frescoes of ancient Rome, we can speak of a history of art. We can connect two periods separated by thousands of years through the works of those who handed on the traditions of art from century to century; but we shall never meet with that continuous and unconscious growth which connects the language of Plautus with that of Dante. The process through which language is settled and unsettled combines in one the two oppo-

site elements of necessity and free will. Though the individual seems to be the prime agent in producing new words and new grammatical forms, he is so only after his individuality has been merged in the common action of the family, tribe, or nation to which he belongs. He can do nothing by himself, and the first impulse to a new formation in language, though given by an individual, is mostly, if not always, given without premeditation, nay, unconsciously. The individual, as such, is powerless, and the results apparently produced by him depend on laws beyond his control, and on the co-operation of all those who form together with him one class, one body, or one organic whole.

But, though it is easy to show, as we have just done, that language cannot be changed or moulded by the taste, the fancy, or genius of man, it is very difficult to explain what causes the growth of language. Ever since Horace it has been usual to compare the growth of languages with the growth of trees. But comparisons are treacherous things. What do we know of the real causes of the growth of a tree, and what can we gain by comparing things which we do not quite understand with things which we understand even less? Many people speak, for instance, of the terminations of the verb, as if they sprouted out from the root as from their parent stock.¹ But what ideas can they connect with such expressions? If we must compare language with a tree, there is one point which may be illustrated by this comparison, and this is that neither language nor the tree can exist or grow by itself. Without the soil, without air and light, the tree could not live; it could not even be conceived to live. It is the same

¹ Castelvetro, in Horne Tooke, p. 629, note.

with language. Language cannot exist by itself; it requires a soil on which to grow, and that soil is the human soul. To speak of language as a thing by itself, as living a life of its own, as growing to maturity, producing offspring, and dying away, is sheer mythology; and though we cannot help using metaphorical expressions, we should always be on our guard, when engaged in inquiries like the present, against being carried away by the very words which we are using.

Now, what we call the growth of language comprises two processes which should be carefully distinguished, though they may be at work simultaneously. These two processes I call,

1. *Dialectical Regeneration.*
2. *Phonetic Decay.*

I begin with the second, as the more obvious, though in reality its operations are mostly subsequent to the operations of dialectical regeneration. I must ask you at present to take it for granted that everything in language had originally a meaning. As language can have no other object but to express our meaning, it might seem to follow almost by necessity that language should contain neither more nor less than what is required for that purpose. It would also seem to follow that if language contains no more than what is necessary for conveying a certain meaning, it would be impossible to modify any part of it without defeating its very purpose. This is really the case in some languages. In Chinese, for instance, *ten* is expressed by *shī*. It would be impossible to change *shī* in the slightest way without making it unfit to express *ten*. If instead of *shī* we pronounced *tśī*, this would mean *seven*, but not *ten*. But now, suppose we wished to

express double the quantity of ten, twice ten, or twenty. We should in Chinese take *eúl*, which is two, put it before *shī*, and say *eúl-shī*, twenty. The same caution which applied to *shī*, applies again to *eúl-shī*. As soon as you change it, by adding or dropping a single letter, it is no longer twenty, but either something else or nothing. We find exactly the same in other languages which, like Chinese, are called monosyllabic. In Tibetan, *chu* is ten, *nyi* two; *nyi-chu*, twenty. In Burmese *she* is ten, *nhit* two; *nhit-she*, twenty.

But how is it in English, or in Gothic, or in Greek and Latin, or in Sanskrit? We do not say *two-ten* in English, nor *duo-decem* in Latin, nor *dvi-dāśa* in Sanskrit.

We find ¹ in Sanskrit *vin'sati*.

in Greek *eikati*.

in Latin *viginti*.

in English *twenty*.

Now here we see, first, that the Sanskrit, Greek, and Latin, are only local modifications of one and the same original word; whereas the English *twenty* is a new compound, the Gothic *tvai tigjus* (two decads), the Anglo-Saxon *tuēntig*, framed from Teutonic materials; a product, as we shall see, of Dialectical Regeneration.

We next observe that the first part of the Latin *viginti* and of the Sanskrit *vin'sati* contains the same number, which from *dvi* has been reduced to *vi*. This is not very extraordinary; for the Latin *bis*, twice, which you still hear at our concerts, likewise stands for an original *dvis*, the English *twice*, the Greek *dis*. This *dis* appears again as a Latin preposition, meaning *a-two*; so that, for instance, *discussion* means, origi-

¹ Bopp, Comparative Grammar, § 820. Schleicher, Deutsche Sprache, s. 233.

nally, striking a-two, different from *percussion*, which means striking through and through. *Discussion* is, in fact, the cracking of a nut in order to get at its kernel. Well, the same word, *dvi* or *vi*, we have in the Latin word for twenty, which is *vi-ginti*, the Sanskrit *vin-sati*.

It can likewise be proved that the second part of *viginti* is a corruption of the old word for ten. Ten, in Sanskrit, is *daśan*; from it is derived *dāśati*, a dec-
ad; and this *dāśati* was again reduced to *śati*; thus giving us with *vi* for *dvi*, two, the Sanskrit *vīśati* or *vinśati*, twenty. The Latin *viginti*, the Greek *eikati*, owe their origin to the same process.

Now consider the immense difference—I do not mean in sound, but in character—between two such words as the Chinese *eúl-shī*, two-ten, or twenty, and those mere cripples of words which we meet with in Sanskrit, Greek, and Latin. In Chinese there is neither too much, nor too little. The word speaks for itself, and requires no commentary. In Sanskrit, on the contrary, the most essential parts of the two component elements are gone, and what remains is a kind of metamorphic agglomerate which cannot be understood without a most minute microscopic analysis. Here, then, you have an instance of what is meant by *phonetic corruption*; and you will perceive how, not only the form, but the whole nature of language is destroyed by it. As soon as phonetic corruption shows itself in a language, that language has lost what we considered to be the most essential character of all human speech, namely, that every part of it should have a meaning. The people who spoke Sanskrit were as little aware that *vinśati* meant *twice ten*

as a Frenchman is that *vingt* contains the remains of *deux* and *dix*. Language, therefore, has entered into a new stage as soon as it submits to the attacks of phonetic change. The life of language has become benumbed and extinct in those words or portions of words which show the first traces of this phonetic mould. Henceforth those words or portions of words can be kept up only artificially or by tradition; and, what is important, a distinction is henceforth established between what is substantial or radical, and what is merely formal or grammatical in words.

For let us now take another instance, which will make it clearer, how phonetic corruption leads to the first appearance of so-called grammatical forms. We are not in the habit of looking on *twenty* as the plural or dual of *ten*. But how was a plural originally formed? In Chinese, which from the first has guarded most carefully against the taint of phonetic corruption, the plural is formed in the most sensible manner. Thus, man in Chinese is *ġin*; *kiai* means the whole or totality. This added to *ġin* gives *ġin-kiai*, which is the plural of man. There are other words which are used for the same purpose in Chinese; for instance, *péi*, which means a class. Hence, *î*, a stranger, followed by *péi*, class, gives *î-péi*, strangers. We have similar plurals in English, but we do not reckon them as grammatical forms. Thus, *man-kind* is formed exactly like *î-péi*, stranger-kind; *Christendom* is the same as all Christians, and *clergy* is synonymous with *clerici*. The same process is followed in other cognate languages. In Tibetan the plural is formed by the addition of such words as *kun*, all, and *tšogs*, multitude.¹

¹ Foucaux, *Grammaire Tibétaine*, p. 27, and Preface, p. x.

Even the numerals, *nine* and *hundred*, are used for the same purpose. And here again, as long as these words are fully understood and kept alive, they resist phonetic corruption; but the moment they lose, so to say, their presence of mind, phonetic corruption sets in, and as soon as phonetic corruption has commenced its ravages, those portions of a word which it affects retain a merely artificial or conventional existence, and dwindle down to grammatical terminations.

I am afraid I should tax your patience too much were I to enter here on an analysis of the grammatical terminations in Sanskrit, Greek, or Latin, in order to show how these terminations arose out of independent words, which were slowly reduced to mere dust by the constant wear and tear of speech. But in order to explain how the principle of phonetic decay leads to the formation of grammatical terminations, let us look to languages with which we are more familiar. Let us take the French adverb. We are told by French grammarians¹ that in order to form adverbs we have to add the termination *ment*. Thus from *bon*, good, we form *bonnement*, from *vrai*, true, *vraiment*. This termination does not exist in Latin. But we meet in Latin² with expressions such as *bonâ mente*, in good faith. We read in Ovid, "Insistam forti mente," I shall insist with a strong mind or will, I shall insist strongly; in French, "J'insisterai fortement." Therefore, what has happened in the growth of Latin, or in the change of Latin into French, is simply this: in phrases such as *forti mente*, the last word was no longer felt as a dis-

¹ Fuchs, *Romanische Sprachen*, s. 355.

² Quint., v. 10, 52. *Bonâ mente factum, ideo palam; malâ, ideo ex insidiâ.*

tinct word, and it lost at the same time its distinct pronunciation. *Mente*, the ablative of *mens*, was changed into *ment*, and was preserved as a merely formal element, as the termination of adverbs, even in cases where a recollection of the original meaning of *mente* (with a mind), would have rendered its employment perfectly impossible. If we say in French that a hammer falls *lourdement*, we little suspect that we ascribe to a piece of iron a heavy mind. In Italian, though the adverbial termination *mente* in *claramente* is no longer felt as a distinct word, it has not as yet been affected by phonetic corruption; and in Spanish it is sometimes used as a distinct word, though even then it cannot be said to have retained its distinct meaning. Thus, instead of saying, “*claramente, concisamente y elegantemente*,” it is more elegant to say in Spanish, “*clara, concisa y elegante mente*.”

It is difficult to form any conception of the extent to which the whole surface of a language may be altered by what we have just described as phonetic change. Think that in the French *vingt* you have the same elements as in *deux* and *dix*; that the second part of the French *douze*, twelve, represents the Latin *decim* in *duodecim*; that the final *te* of *trente* was originally the Latin *ginta* in *triginta*, which *ginta* was again a derivation and abbreviation of the Sanskrit *dāsa* or *daśati*, ten. Then consider how early this phonetic disease must have broken out. For in the same manner as *vingt* in French, *veinte* in Spanish, and *venti* in Italian presuppose the more primitive *viginti* which we find in Latin, so this Latin *viginti*, together with the Greek *eikati*, and the Sanskrit *vinśati* presuppose an earlier language from which they are in turn

derived, and in which, previous to *viginti*, there must have been a more primitive form *dvi-ginti*, and previous to this again, another compound as clear and intelligible as the Chinese *eúl-shi*, consisting of the ancient Aryan names for two, *dvi*, and ten, *dāsati*. Such is the virulence of this phonetic change, that it will sometimes eat away the whole body of a word, and leave nothing behind but decayed fragments. Thus, *sister*, which in Sanskrit is *svasar*,¹ appears in Pehlvi and in Ossetian as *cho*. *Daughter*, which in Sanskrit is *duhitar*, has dwindled down in Bohemian to *dci* (pronounced *tsi*).² Who would believe that *tear* and *larme* are derived from the same source; that the French *même* contains the Latin *semetipsissimus*; that in *aujourd'hui* we have the Latin word *dies* twice!³ Who would recognize the Latin *pater* in the Armenian *hayr*? Yet we make no difficulty about identifying *père* and *pater*; and as several initial h's in Armenian correspond to an original *p* (*het* = *pes*, *pedis*; *hing* = *πέντε*; *hour* = *πῦρ*), it follows that *hayr* is *pater*.⁴

We are accustomed to call these changes the growth of language, but it would be more appropriate to call this process of phonetic change decay, and thus to distinguish it from the second or dialectical process which we must now examine, and which involves, as you will see, a more real principle of growth.

In order to understand the meaning of *dialectical*

¹ Sanskrit *s* = Persian *h*; therefore *svasar* = *hvahar*. This becomes *chohar*, *chor*, and *cho*. Zend, *qan̄ha*, acc. *qan̄hareṃ*, Persian, *khāher*. Bopp, Comp. Gram. § 35.

² Schleicher, Beiträge, b. ii. s. 392: *dci* = *dāgti*; gen. *dcere* = *dūgtēre*.

³ *Hui* = *hodie*, Ital. *oggi* and *oggiidi*; *jour* = *diurnum*, from *dies*.

⁴ See M. M.'s Letter to Chevalier Bunsen, On the Turanian Languages, p. 67.

regeneration we must first see clearly what we mean by dialect. We saw before that language has no independent substantial existence. Language exists in man, it lives in being spoken, it dies with each word that is pronounced, and is no longer heard. It is a mere accident that language should ever have been reduced to writing, and have been made the vehicle of a written literature. Even now the largest number of languages have produced no literature. Among the numerous tribes of Central Asia, Africa, America, and Polynesia, language still lives in its natural state, in a state of continual combustion; and it is there that we must go if we wish to gain an insight into the growth of human speech previous to its being arrested by any literary interference. What we are accustomed to call languages, the literary idioms of Greece, and Rome, and India, of Italy, France, and Spain, must be considered as artificial, rather than as natural forms of speech. The real and natural life of language is in its dialects, and in spite of the tyranny exercised by the classical or literary idioms, the day is still very far off which is to see the dialects, even of such classical languages as Italian and French, entirely eradicated. About twenty of the Italian dialects have been reduced to writing, and made known by the press.¹ Champollion-Figeac reckons the most distinguishable dialects of France at fourteen.² The number of modern Greek dialects³ is carried by some as high as seventy, and though many of these are hardly more than local varieties, yet some, like the Tzaconic, differ from the literary language as much as Doric differed from Attic.

¹ See Marsh, p. 678; Sir John Stoddart's Glossology, s. 31.

² Glossology, p. 33.

³ Ibid., p. 29.

In the island of Lesbos, villages distant from each other not more than two or three hours have frequently peculiar words of their own, and their own peculiar pronunciation.¹ But let us take a language which, though not without a literature, has been less under the influence of classical writers than Italian or French, and we shall then see at once how abundant the growth of dialects! The Friesian, which is spoken on a small area on the north-western coast of Germany, between the Scheldt and Jutland, and on the islands near the shore, which has been spoken there for at least two thousand years,² and which possesses literary documents as old as the twelfth century, is broken up into endless local dialects. I quote from Kohl's Travels. "The commonest things," he writes, "which are named almost alike all over Europe, receive quite different names in the different Friesian Islands. Thus, in Amrum, *father* is called *aatj*; on the Halligs, *baba* or *babe*; in Sylt, *foder* or *vaar*; in many districts on the main-land, *täte*; in the eastern part of Föhr, *oti* or *ohitj*. Although these people live within a couple of German miles from each other, these words differ more than the Italian *padre* and the English *father*. Even the names of their districts and islands are totally different in different dialects. The island of *Sylt* is called *Söl*, *Sol*, and *Sal*." Each of these dialects, though it might be made out by a Friesian scholar, is unintelligible except to the peasants of each narrow district in which it prevails. What is therefore generally called the Friesian language, and described as such in Friesian grammars, is in reality

¹ *Nea Pandora*, 1859, Nos. 227, 229. *Zeitschrift für Vergleichende Sprachforschung*, x. s. 190.

² Grimm, *Geschichte der Deutschen Sprache*, p. 668: Marsh, p. 379.

but one out of many dialects, though, no doubt, the most important; and the same holds good with regard to all so-called literary languages.

It is a mistake to imagine that dialects are everywhere corruptions of the literary language. Even in England,¹ the local patois have many forms which are more primitive than the language of Shakespeare, and the richness of their vocabulary surpasses, on many points, that of the classical writers of any period. Dialects have always been the feeders rather than the channels of a literary language; anyhow, they are parallel streams which existed long before one of them was raised to that temporary eminence which is the result of literary cultivation.

What Grimm says of the origin of dialects in general applies only to such as are produced by phonetic corruption. "Dialects," he writes,² "develop themselves progressively, and the more we look backward in the history of language the smaller is their number, and the less definite their features. All multiplicity arises gradually from an original unity." So it seems, indeed, if we build our theories of language exclusively on the materials supplied by literary idioms, such as Sanskrit, Greek, Latin, and Gothic. No doubt these are the royal heads in the history of language. But as political history ought to be more than a chronicle of royal dynasties, so the historian of language ought never to

¹ "Some people, who may have been taught to consider the Dorset dialect as having originated from corruption of the written English, may not be prepared to hear that it is not only a separate offspring from the Anglo-Saxon tongue, but purer, and in some cases richer, than the dialect which is chosen as the national speech." — *Barnes, Poems in Dorset Dialect*, Preface, p. xiv.

² *Geschichte der Deutschen Sprache*, s. 833.

lose sight of those lower and popular strata of speech from which these dynasties originally sprang, and by which alone they are supported.

Here, however, lies the difficulty. How are we to trace the history of dialects? In the ancient history of language, literary dialects alone supply us with materials, whereas the very existence of spoken dialects is hardly noticed by ancient writers.

We are told, indeed, by Pliny,¹ that in Colchis there were more than three hundred tribes speaking different dialects; and that the Romans, in order to carry on any intercourse with the natives, had to employ a hundred and thirty interpreters. This is probably an exaggeration; but we have no reason to doubt the statement of Strabo,² who speaks of seventy tribes living together in that country, which, even now, is called "the mountain of languages." In modern times, again, when missionaries have devoted themselves to the study of the languages of savage and illiterate tribes, they have seldom been able to do more than to acquire one out of many dialects; and, when their exertions have been at all successful, that dialect which they had reduced to writing, and made the medium of their civilizing influence, soon assumed a kind of literary supremacy, so as to leave the rest behind as barbarous jargons. Yet, whatever is known of the dialects of savage tribes is chiefly or entirely due to missionaries; and it is much to be desired that their attention should again and again be directed to this interesting

¹ Pliny, vi. 5; Hervas, *Catalogo*, i. 118.

² Pliny depends on Timosthenes, whom Strabo declares untrustworthy (ii. p. 93, ed. Cassaub.) Strabo himself says of Dioscurias, *συνέρχεσθαι ἐς αὐτὴν ἐβδόμηκοντα, οἱ δὲ καὶ τριακόσια ἔθνη φασὶν οἷς οὐδὲν τῶν ὄντων μέλει* (x. p. 498). The last words refer probably to Timosthenes.

problem of the dialectical life of language which they alone have the means of elucidating. Gabriel Sagard, who was sent as a missionary to the Hurons in 1626, and published his "Grand Voyage du pays des Hurons," at Paris, in 1631, states that among these North American tribes hardly one village speaks the same language as another; nay, that two families of the same village do not speak exactly the same language. And he adds what is important, that their language is changing every day, and is already so much changed that the ancient Huron language is almost entirely different from the present. During the last two hundred years, on the contrary, the languages of the Hurons and Iroquois are said not to have changed at all.¹ We read of missionaries² in Central America who attempted to write down the language of savage tribes, and who compiled with great care a dictionary of all the words they could lay hold of. Returning to the same tribe after the lapse of only ten years, they found that this dictionary had become antiquated and useless. Old words had sunk to the ground, and new ones had risen to the surface; and to all outward appearance the language was completely changed.

Nothing surprised the Jesuit missionaries so much as the immense number of languages spoken by the natives of America. But this, far from being a proof of a high state of civilization, rather showed that the various races of America had never submitted, for any length of time, to a powerful political concentration, and that they had never succeeded in founding great

¹ Du Ponceau, p. 110.

² S. F. Waldeck, Lettre à M. Jomard des environs de Palenqué, Amérique Centrale. ("Il ne pouvait se servir, en 1833, d'un vocabulaire composé avec beaucoup de soin dix ans auparavant.")

national empires. Hervas reduces, indeed, all the dialects of America to eleven families¹ — four for the south, and seven for the north; but this could be done only by the same careful and minute comparison which enables us to class the idioms spoken in Iceland and Ceylon as cognate dialects. For practical purposes the dialects of America are distinct dialects, and the people who speak them are mutually unintelligible.

We hear the same observations everywhere where the rank growth of dialects has been watched by intelligent observers. If we turn our eyes to Burmah, we find that there the Burmese has produced a considerable literature, and is the recognized medium of communication not only in Burmah, but likewise in Pegu and Arakan. But the intricate mountain ranges of the peninsula of the Irawaddy² afford a safe refuge to many independent tribes, speaking their own independent dialects; and in the neighborhood of Manipura alone Captain Gordon collected no less than twelve dialects. "Some of them," he says, "are spoken by no more than thirty or forty families, yet so different from the rest as to be unintelligible to the nearest neighborhood." Brown, the excellent American missionary, who has spent his whole life in preaching the Gospel in that part of the world, tells us that some tribes who left their native village to settle in another valley, became unintelligible to their forefathers in two or three generations.³

In the north of Asia the Ostiakes, as Messerschmidt informs us, though really speaking the same language

¹ Catalogo, i. 393.

² Turanian Languages, p. 114.

³ Ibid., p. 233.

everywhere, have produced so many words and forms peculiar to each tribe, that even within the limits of twelve or twenty German miles, communication among them becomes extremely difficult. Castrèn, the heroic explorer of the languages of northern and central Asia,¹ assures us that some of the Mongolian dialects are actually entering into a new phase of grammatical life; and that while the literary language of the Mongolians has no terminations for the persons of the verb, that characteristic feature of Turanian speech had lately broken out in the spoken dialects of the Buriates and in the Tungusic idioms near Njertschinsk in Siberia.

One more observation of the same character from the pen of Robert Moffat, in his "Missionary Scenes and Labors in Southern Africa." "The purity and harmony of language," he writes, "is kept up by their pitchos, or public meetings, by their festivals and ceremonies, as well as by their songs and their constant intercourse. With the isolated villagers of the desert it is far otherwise; they have no such meetings; they are compelled to traverse the wilds, often to a great distance from their native village. On such occasions fathers and mothers, and all who can bear a burden, often set out for weeks at a time, and leave their children to the care of two or three infirm old people. The infant progeny, some of whom are beginning to lisp, while others can just master a whole sentence, and those still further advanced, romping and playing together, the children of nature, through their livelong day, *become habituated to a language of their own.* The more voluble condescend to the less precocious; and

¹ Turanian Languages, p. 30.

thus, from this infant Babel, proceeds a dialect of a host of mongrel words and phrases, joined together without rule, and *in the course of one generation the entire character of the language is changed.*"

Such is the life of language in a state of nature ; and in a similar manner, we have a right to conclude, languages grew up which we only know after the bit and bridle of literature were thrown over their necks. It need not be a written or classical literature to give an ascendancy to one out of many dialects, and to impart to its peculiarities an undisputed legitimacy. Speeches at pitchos or public meetings, popular ballads, national laws, religious oracles, exercise, though to a smaller extent, the same influence. They will arrest the natural flow of language in the countless rivulets of its dialects, and give a permanency to certain formations of speech which, without these external influences, could have enjoyed but an ephemeral existence. Though we cannot fully enter, at present, on the problem of the origin of language, yet this we can clearly see, that, whatever the origin of language was, its first tendency must have been towards an unbounded variety. To this there was, however, a natural check, which prepared from the very beginning the growth of national and literary languages. The language of the father became the language of a family ; the language of a family that of a clan. In one and the same clan different families would preserve among themselves their own familiar forms and expressions. They would add new words, some so fanciful and quaint as to be hardly intelligible to other members of the same clan. Such expressions would naturally be suppressed, as we suppress provincial peculiarities and

pet words of our own, at large assemblies where all clansmen meet and are expected to take part in general discussions. But they would be cherished all the more round the fire of each tent, in proportion as the general dialect of the clan assumed a more formal character. Class dialects, too, would spring up; the dialects of servants, grooms, shepherds, and soldiers. Women would have their own household words; and the rising generation would not be long without a more racy phraseology of their own. Even we, in this literary age, and at a distance of thousands of years from those early fathers of language, do not speak at home as we speak in public. The same circumstances which give rise to the formal language of a clan, as distinguished from the dialects of families, produce, on a larger scale, the languages of a confederation of clans, of nascent colonies, of rising nationalities. Before there is a national language, there have always been hundreds of dialects in districts, towns, villages, clans, and families; and though the progress of civilization and centralization tends to reduce their number and to soften their features, it has not as yet annihilated them, even in our own time.

Let us now look again at what is commonly called the history, but what ought to be called, the natural growth, of language, and we shall easily see that it consists chiefly in the play of the two principles which we have just examined, *phonetic decay* and *dialectical regeneration* or *growth*. Let us take the six Romance languages. It is usual to call these the daughters of Latin. I do not object to the names of parent and daughter as applied to languages; only we must not allow such apparently clear and simple terms to cover

obscure and vague conceptions. Now if we call Italian the daughter of Latin, we do not mean to ascribe to Italian a new vital principle. Not a single radical element was newly created for the formation of Italian. Italian is Latin in a new form. Italian is modern Latin, or Latin ancient Italian. The names *mother* and *daughter* only mark different periods in the growth of a language substantially the same. To speak of Latin dying in giving birth to her offspring is again pure mythology, and it would be easy to prove that Latin was a living language long after Italian had learnt to run alone. Only let us clearly see what we mean by Latin. The classical Latin is one out of many dialects spoken by the Aryan inhabitants of Italy. It was the dialect of Latium, in Latium the dialect of Rome, at Rome the dialect of the patricians. It was fixed by Livius Andronicus, Ennius, Nævius, Cato, and Lucretius, polished by the Scipios, Hortensius, and Cicero. It was the language of a restricted class, of a political party, of a literary set. Before their time, the language of Rome must have changed and fluctuated considerably. Polybius tells us (iii. 22), that the best-informed Romans could not make out without difficulty the language of the ancient treaties between Rome and Carthage. Horace admits (Ep. ii. 1, 86), that he could not understand the old Salian poems, and he hints that no one else could. Quintilian (i. 6, 40) says that the Salian priests could hardly understand their sacred hymns. If the plebeians had obtained the upperhand over the patricians, Latin would have been very different from what it is in Cicero, and we know that even Cicero, having been brought up at Arpinum, had to give up some of his

provincial peculiarities, such as the dropping of the final *s*, when he began to mix in fashionable society, and had to write for his new patrician friends.¹ After having been established as the language of legislation, religion, literature, and general civilization, the classical Latin dialect became stationary and stagnant. It could not grow, because it was not allowed to change or to deviate from its classical correctness. It was haunted by its own ghost. Literary dialects, or what are commonly called classical languages, pay for their temporary greatness by inevitable decay. They are like stagnant lakes at the side of great rivers. They form reservoirs of what was once living and running speech, but they are no longer carried on by the main current. At times it may seem as if the whole stream of language was absorbed by these lakes, and we can hardly trace the small rivulets which run on in the main bed. But if lower down, that is to say, later in history, we meet again with a new body of stationary language, forming or formed, we may be sure that its tributaries were those very rivulets which for a time were almost lost from our sight. Or it may be more accurate to compare a classical or literary idiom with the frozen surface of a river, brilliant and smooth, but stiff and cold. It is mostly by political commotions that this surface of the more polite and cultivated speech is broken and carried away by the waters rising underneath. It is during times when the higher classes are either crushed in religious and social struggles, or

¹ Quintilian, ix. 4. "Nam neque Lucilium putant uti eadem (*s*) ultima, cum dicit Serenu fuit, et Dignu loco. Quin etiam Cicero in Oratore plures antiquorum tradit sic locutos." In some phrases the final *s* was omitted in conversation; e. g. *abin* for *abisne*, *viden* for *videsne*, *opu'st* for *opus est*, *conabere* for *conaberis*.

mix again with the lower classes to repel foreign invasion; when literary occupations are discouraged, palaces burnt, monasteries pillaged, and seats of learning destroyed, — it is then that the popular, or, as they are called, the vulgar dialects, which had formed a kind of undercurrent, rise beneath the crystal surface of the literary language, and sweep away, like the waters in spring, the cumbrous formations of a by-gone age. In more peaceful times, a new and popular literature springs up in a language which *seems* to have been formed by conquests or revolutions, but which, in reality, had been growing up long before, and was only brought out, ready made, by historical events. From this point of view we can see that no literary language can ever be said to have been the mother of another language. As soon as a language loses its unbounded capability of change, its carelessness about what it throws away, and its readiness in always supplying instantaneously the wants of mind and heart, its natural life is changed into a merely artificial existence. It may still live on for a long time, but while it seems to be the leading shoot, it is in reality but a broken and withering branch, slowly falling from the stock from which it sprang. The sources of Italian are not to be found in the classical literature of Rome, but in the popular dialects of Italy. English did not spring from the Anglo-Saxon of Wessex only, but from the dialects spoken in every part of Great Britain, distinguished by local peculiarities, and modified at different times by the influence of Latin, Danish, Norman, French, and other foreign elements. Some of the local dialects of English, as spoken at the present day, are of great importance for a critical study of English,

and a French prince, now living in this country, deserves great credit for collecting what can still be saved of English dialects. Hindustani is not the daughter of Sanskrit, as we find it in the Vedas, or in the later literature of the Brahmans: it is a branch of the living speech of India, springing from the same stem from which Sanskrit sprang, when it first assumed its literary independence.

While thus endeavoring to place the character of dialects, as the feeders of language, in a clear light, I may appear to some of my hearers to have exaggerated their importance. No doubt, if my object had been different, I might easily have shown that, without literary cultivation, language would never have acquired that settled character which is essential for the communication of thought; that it would never have fulfilled its highest purpose, but have remained the mere jargon of shy troglodytes. But as the importance of literary languages is not likely to be overlooked, whereas the importance of dialects, as far as they sustain the growth of language, had never been pointed out, I thought it better to dwell on the advantages which literary languages derive from dialects, rather than on the benefits which dialects owe to literary languages. Besides, our chief object to-day was to explain the growth of language, and for that purpose it is impossible to exaggerate the importance of the constant undergrowth of dialects. Remove a language from its native soil, tear it away from the dialects which are its feeders, and you arrest at once its natural growth. There will still be the progress of phonetic corruption, but no longer the restoring influence of dialectic regeneration. The language which the Norwegian refugees brought to

Iceland has remained almost the same for seven centuries, whereas on its native soil, and surrounded by local dialects, it has grown into two distinct languages, the Swedish and Danish. In the eleventh century, the languages of Sweden, Denmark, and Iceland are supposed¹ to have been identical, nor can we appeal to foreign conquest, or to the admixture of foreign with native blood, in order to account for the changes which the language underwent in Sweden and Denmark, but not in Iceland.²

We can hardly form an idea of the unbounded resources of dialects. When literary languages have stereotyped one general term, their dialects will supply fifty, though each with its own special shade of meaning. If new combinations of thought are evolved in the progress of society, dialects will readily supply the required names from the store of their so-called superfluous words. There are not only local and provincial, but also class dialects. There is a dialect of shepherds, of sportsmen, of soldiers, of farmers. I suppose there are few persons here present who could tell the exact meaning of a horse's poll, crest, withers, dock, hamstring, cannon, pastern, coronet, arm, jowl, and muzzle. Where the literary language speaks of the young of all sorts of animals, farmers, shepherds, and sportsmen would be ashamed to use so general a term.

"The idiom of nomads," as Grimm says, "contains an abundant wealth of manifold expressions for sword and weapons, and for the different stages in the life of

¹ Marsh, *Lectures*, pp. 133, 368.

² "There are fewer local peculiarities of form and articulation in our vast extent of territory (U. S.), than on the comparatively narrow soil of Great Britain."—*Marsh*, p. 667.

their cattle. In a more highly cultivated language these expressions become burthensome and superfluous. But, in a peasant's mouth, the bearing, calving, falling, and killing of almost every animal has its own peculiar term, as the sportsman delights in calling the gait and members of game by different names. The eye of these shepherds, who live in the free air, sees further, their ear hears more sharply, — why should their speech not have gained that living truth and variety ? ”

Thus Juliana Berners, lady prioress of the nunnery of Sopwell in the fifteenth century, the reputed author of the book of St. Albans, informs us that we must not use names of multitudes promiscuously, but we are to say, “ a congregacyon of people, a hoost of men, a felyshyppynge of yomen, and a bevy of ladies ; we must speak of a herde of dere, swannys, cranyes, or wrenys, a sege of herons or bytourys, a muster of pecoakes, a wathe of nyghtyngales, a flyghte of doves, a claterynge of choughes, a pryde of lyons, a slewthe of beeres, a gagle of geys, a skulke of foxes, a sculle of frerys, a pontificality of prestys, a bomynable syght of monkes, and a superfluyte of nonnes,” and so of other human and brute assemblages. In like manner, in dividing game for the table, the animals were not carved, but “ a dere was broken, a gose reryd, chekyn frusshed, a cony unlaced, a crane dysplayed, a curlewe unioynted, a quayle wynggyd, a swanne lyfte, a lambe sholdered, a heron dysmembryd, a pecoake dysfigured, a samon chynyed, a hadoke sydyd, a sole loynyed, and a breme splayed.”¹

What, however, I wanted particularly to point out in this lecture is this, that neither of the causes which

¹ Marsh, Lectures, pp. 181, 590.

produce the growth, or, according to others, constitute the history of language, is under the control of man. The phonetic decay of language is not the result of mere accident; it is governed by definite laws, as we shall see when we come to consider the principles of comparative grammar. But these laws were not made by man; on the contrary, man had to obey them without knowing of their existence.

In the growth of the modern Romance languages out of Latin, we can perceive not only a general tendency to simplification, not only a natural disposition to avoid the exertion which the pronunciation of certain consonants, and still more, of groups of consonants, entails on the speaker: but we can see distinct laws for each of the Romance dialects, which enable us to say, that in French the Latin *patrem* would naturally grow into the modern *père*. The final *m* is always dropped in the Romance dialects, and it was dropped even in Latin. Thus we get *patre* instead of *patrem*. Now, a Latin *t* between two vowels in such words as *pater* is invariably suppressed in French. This is a law, and by means of it we can discover at once that *catena* must become *chaîne*; *fata*, a later feminine representation of the old neuter *fatum*, *fée*; *pratium* a meadow, *pré*. From *pratium* we derive *prataria*, which in French becomes *prairie*; from *fatum*, *fataria*, the English *fairy*. Thus every Latin participle in *atus*, like *amatus*, loved, must end in French in *é*. The same law then changed *patre* (pronounced *pa-tere*) into *paere*, or *père*; it changed *matrem* into *mère*, *fratrem* into *frère*. These changes take place gradually but irresistibly, and, what is most important, they are completely beyond the reach or control of the free will of man.

Dialectical growth again is still more beyond the control of individuals. For although a poet may knowingly and intentionally invent a new word, its acceptance depends on circumstances which defy individual interference. There are some changes in the grammar which at first sight might seem to be mainly attributable to the caprice of the speaker. Granted, for instance, that the loss of the Latin terminations was the natural result of a more careless pronunciation; granted that the modern sign of the French genitive *du* is a natural corruption of the Latin *de illo*, — yet the choice of *de*, instead of any other word, to express the genitive, the choice of *illo*, instead of any other pronoun, to express the article, might seem to prove that man acted as a free agent in the formation of language. But it is not so. No single individual could deliberately have set to work in order to abolish the old Latin genitive, and to replace it by the periphrastic compound *de illo*. It was necessary that the inconvenience of having no distinct or distinguishable sign of the genitive should have been felt by the people who spoke a vulgar Latin dialect. It was necessary that the same people should have used the preposition *de* in such a manner as to lose sight of its original local meaning altogether (for instance, *una de multis*, in Horace, i. e., one out of many). It was necessary, again, that the same people should have felt the want of an article, and should have used *illo* in numerous expressions, where it seemed to have lost its original pronominal power. It was necessary that all these conditions should be given, before one individual and after him another, and after him hundreds and thousands and millions, could use

de illo as the exponent of the genitive ; and change it into the Italian *dello, del*, and the French *du*.

The attempts of single grammarians and purists to improve language are perfectly bootless ; and we shall probably hear no more of schemes to prune languages of their irregularities. It is very likely, however, that the gradual disappearance of irregular declensions and conjugations is due, in literary as well as in illiterate languages, to the dialect of children. The language of children is more regular than our own. I have heard children say *badder* and *baddest*, instead of *worse* and *worst*. Children will say, *I gaed, I coomd, I caught* ; and it is this sense of grammatical justice, this generous feeling of what ought to be, which in the course of centuries has eliminated many so-called irregular forms. Thus the auxiliary verb in Latin was very irregular. If *sumus* is *we are*, and *sunt, they are*, the second person, *you are*, ought to have been, at least according to the strict logic of children, *sutis*. This, no doubt, sounds very barbarous to a classical ear accustomed to *estis*. And we see how French, for instance, has strictly preserved the Latin forms in *nous sommes, vous êtes, ils sont*. But in Spanish we find *somos, sois, son* ; and this *sois* stands for *sutis*. We find similar traces of grammatical levelling in the Italian *siamo, siete, sono*, formed in analogy of regular verbs such as *crediamo, credete, credono*. The second person, *sei*, instead of *es*, is likewise infantine grammar. So are the Wallachian *süntemu, we are, sünteti, you are*, which owe their origin to the third person plural *sünt, they are*. And what shall we say of such monsters as *essendo*, a gerund derived on principles of strict justice from an infinitive *essere*, like *credendo* from *credere* !

However, we need not be surprised, for we find similar barbarisms in English. Even in Anglo-Saxon, the third person plural, *sind*, has by a false analogy been transferred to the first and second persons ; and instead of the modern English,

we are you are they are	} we find	in Old Norse.	in Gothic.
		ër-um	sijum ¹
		ër-udh	sijuth
		ër-u.	sind.

Dialectically we hear *I be*, instead of *I am* ; and if Chartism should ever gain the upper hand, we must be prepared for newspapers adopting such forms as *I says*, *I knows*.

These various influences and conditions under which language grows and changes, are like the waves and winds which carry deposits to the bottom of the sea, where they accumulate, and rise, and grow, and at last appear on the surface of the earth as a stratum, perfectly intelligible in all its component parts, not produced by an inward principle of growth, nor regulated by invariable laws of nature ; yet, on the other hand, by no means the result of mere accident, or the production of lawless and uncontrolled agencies. We cannot be careful enough in the use of our words. Strictly speaking, neither *history* nor *growth* is applicable to the changes of the shifting surface of the earth. *History* applies to the actions of free agents ; *growth* to the natural unfolding of organic beings. We speak, however, of the growth of the crust of the earth, and we know what we mean by it ; and it is in this sense,

¹ The Gothic forms *sijum*, *sijuth*, are not organic. They are either derived by false analogy from the third person plural *sind*, or a new base *sij* was derived from the subjunctive *sijau*, Sanskrit *sydm*.

but not in the sense of growth as applied to a tree, that we have a right to speak of the growth of language. If that modification which takes place in time by continually new combinations of given elements, which withdraws itself from the control of free agents, and can in the end be recognized as the result of natural agencies, may be called growth; and if so defined, we may apply it to the growth of the crust of the earth; the same word, in the same sense, will be applicable to language, and will justify us in removing the science of language from the pale of the historical to that of the physical sciences.

There is another objection which we have to consider, and the consideration of which will again help us to understand more clearly the real character of language. The great periods in the growth of the earth which have been established by geological research are brought to their close, or very nearly so, when we discover the first vestiges of human life, and when the history of man, in the widest sense of the word, begins. The periods in the growth of language, on the contrary, begin and run parallel with the history of man. It has been said, therefore, that although language may not be merely a work of art, it would, nevertheless, be impossible to understand the life and growth of any language without an historical knowledge of the times in which that language grew up. We ought to know, it is said, whether a language which is to be analyzed under the microscope of comparative grammar, has been growing up wild, among wild tribes, without a literature, oral or written, in poetry or in prose; or whether it has received the cultivation of poets, priests, and orators, and retained the



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impress of a classical age. Again, it is only from the annals of political history that we can learn whether one language has come in contact with another, how long this contact has lasted, which of the two nations stood higher in civilization, which was the conquering and which the conquered, which of the two established the laws, the religion, and the arts of the country, and which produced the greatest number of national teachers, popular poets, and successful demagogues. All these questions are of a purely historical character, and the science which has to borrow so much from historical sources, might well be considered an anomaly in the sphere of the physical sciences.

Now, in answer to this, it cannot be denied that among the physical sciences none is so intimately connected with the history of man as the science of language. But a similar connection, though in a less degree, can be shown to exist between other branches of physical research and the history of man. In zoölogy, for instance, it is of some importance to know at what particular period of history, in what country, and for what purposes certain animals were tamed and domesticated. In ethnology, a science, we may remark in passing, quite distinct from the science of language, it would be difficult to account for the Caucasian stamp impressed on the Mongolian race in Hungary, or on the Tatar race in Turkey, unless we knew from written documents the migrations and settlements of the Mongolic and Tataric tribes in Europe. A botanist, again, comparing several specimens of rye, would find it difficult to account for their respective peculiarities, unless he knew that in some parts of the world this plant has been cultivated for centuries,

whereas in other regions, as, for instance, in Mount Caucasus, it is still allowed to grow wild. Plants have their own countries, like races, and the presence of the cucumber in Greece, the orange and cherry in Italy, the potatoe in England, and the vine at the Cape, can be fully explained by the historian only. The more intimate relation, therefore, between the history of language and the history of man is not sufficient to exclude the science of language from the circle of the physical sciences.

Nay, it might be shown, that, if strictly defined, the science of language can declare itself completely independent of history. If we speak of the language of England, we ought, no doubt, to know something of the political history of the British Isles, in order to understand the present state of that language. Its history begins with the early Britons, who spoke a Celtic dialect ; it carries us on to the Saxon conquest, to the Danish invasions, to the Norman conquest : and we see how each of these political events contributed to the formation of the character of the language. The language of England may be said to have been in succession Celtic, Saxon, Norman, and English. But if we speak of the history of the English language, we enter on totally different ground. The English language was never Celtic, the Celtic never grew into Saxon, nor the Saxon into Norman, nor the Norman into English. The history of the Celtic language runs on to the present day. It matters not whether it be spoken by all the inhabitants of the British Isles, or only by a small minority in Wales, Ireland, and Scotland. A language, as long as it is spoken by anybody, lives and has its substantive existence. The last



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old woman that spoke Cornish, and to whose memory it is now intended to raise a monument, represented by herself alone the ancient language of Cornwall. A Celt may become an Englishman, Celtic and English blood may be mixed; and who could tell at the present day the exact proportion of Celtic and Saxon blood in the population of England? But languages are never mixed. It is indifferent by what name the language spoken in the British Islands be called, whether English or British or Saxon; to the student of language English is Teutonic, and nothing but Teutonic. The physiologist may protest, and point out that in many instances the skull, or the bodily habitat of the English language, is of a Celtic type; the genealogist may protest and prove that the arms of many an English family are of Norman origin; the student of language must follow his own way. Historical information as to an early substratum of Celtic inhabitants in Britain, as to Saxon, Danish, and Norman invasions may be useful to him. But though every record were burned, and every skull mouldered, the English language, as spoken by any ploughboy, would reveal its own history, if analyzed according to the rules of comparative grammar. Without the help of history, we should see that English is Teutonic, that like Dutch and Friesian it belongs to the Low-German branch; that this branch, together with the High-German, Gothic, and Scandinavian branches, constitute the Teutonic class; that this Teutonic class, together with the Celtic, Slavonic, the Hellenic, Italic, Iranic, and Indic classes constitute the great Indo-European or Aryan family of speech. In the English dictionary the student of the science of language

can detect, by his own tests, Celtic, Norman, Greek, and Latin ingredients, but not a single drop of foreign blood has entered into the organic system of the English language. The grammar, the blood and soul of the language, is as pure and unmixed in English as spoken in the British Isles, as it was when spoken on the shores of the German Ocean by the Angles, Saxons, and Juts of the continent.

In thus considering and refuting the objections which have been, or might be, made against the admission of the science of language into the circle of the physical sciences, we have arrived at some results which it may be useful to recapitulate before we proceed further. We saw that whereas philology treats language only as a means, comparative philology chooses language as the object of scientific inquiry. It is not the study of one language, but of many, and in the end of all, which forms the aim of this new science. Nor is the language of Homer of greater interest, in the scientific treatment of human speech, than the dialect of the Hottentots.

We saw, secondly, that after the first practical acquisition and careful analysis of the facts and forms of any language, the next and most important step is the classification of all the varieties of human speech, and that only after this has been accomplished would it be safe to venture on the great questions which underlie all physical research, the questions as to the what, the whence, and the why of language.

We saw, thirdly, that there is a distinction between what is called history and growth. We determined the true meaning of growth, as applied to language, and perceived how it was independent of the caprice of

man, and governed by laws that could be discovered by careful observation, and be traced back in the end to higher laws, which govern the organs both of human thought, and of the human voice. Though admitting that the science of language was more intimately connected than any other physical science with what is called the political history of man, we found that, strictly speaking, our science might well dispense with this auxiliary, and that languages can be analyzed and classified on their own evidence particularly on the strength of their grammatical articulation, without any reference to the individuals, families, clans, tribes, nations, or races by whom they are or have been spoken.

In the course of these considerations, we had to lay down two axioms, to which we shall frequently have to appeal in the progress of our investigations. The first declares grammar to be the most essential element, and therefore the ground of classification in all languages which have produced a definite grammatical articulation; the second denies the possibility of a mixed language.

These two axioms are, in reality, but one, as we shall see when we examine them more closely. There is hardly a language which in one sense may not be called a mixed language. No nation or tribe was ever so completely isolated as not to admit the importation of a certain number of foreign words. In some instances these imported words have changed the whole native aspect of the language, and have even acquired a majority over the native element. Turkish is a Turanian dialect; its grammar is purely Tataric or Turanian. The Turks, however, pos-

essed but a small literature and narrow civilization before they were converted to Mohammedanism. Now, the language of Mohammed was Arabic, a branch of the Semitic family, closely allied to Hebrew and Syriac. Together with the Koran, and their law and religion, the Turks learned from the Arabs, their conquerors, many of the arts and sciences connected with a more advanced stage of civilization. Arabic became to the Turks what Latin was to the Germans during the Middle Ages; and there is hardly a word in the higher intellectual terminology of Arabic, that might not be used, more or less naturally, by a writer in Turkish. But the Arabs, again, at the very outset of their career of conquest and conversion, had been, in science, art, literature, and polite manners, the pupils of the Persians, whom they had conquered; they stood to them in the same relation as the Romans stood to the Greeks. Now, the Persians speak a language which is neither Semitic, like Arabic, nor Turanian, like Turkish; it is a branch of the Indo-European or Aryan family of speech. A large infusion of Persian words thus found its way into Arabic, and through Arabic into Turkish; and the result is that at the present moment the Turkish language, as spoken by the higher ranks at Constantinople, is so entirely overgrown with Persian and Arabic words, that a common clod from the country understands but little of the so-called Osmanli, though its grammar is exactly the same as the grammar which he uses in his Tataric utterance.

There is, perhaps, no language so full of words evidently derived from the most distant sources as English. Every country of the globe seems to have brought some of its verbal manufactures to the intellectual market of

England. Latin, Greek, Hebrew, Celtic, Saxon, Danish, French, Spanish, Italian, German — nay, even Hindustani, Malay, and Chinese words, lie mixed together in the English dictionary. On the evidence of words alone it would be impossible to classify English with any other of the established stocks and stems of human speech. Leaving out of consideration the smaller ingredients, we find, on comparing the Teutonic with the Latin, or Neo-Latin or Norman elements in English, that the latter have a decided majority over the home-grown Saxon terms. This may seem incredible; and if we simply took a page of any English book, and counted therein the words of purely Saxon and Latin origin, the majority would be no doubt on the Saxon side. The articles, pronouns, prepositions, and auxiliary verbs, all of which are of Saxon growth, occur over and over again in one and the same page. Thus, Hickes maintained that nine tenths of the English dictionary were Saxon, because there were only three words of Latin origin in the Lord's prayer. Sharon Turner, who extended his observations over a larger field, came to the conclusion that the relation of Norman to Saxon was as four to six. Another writer, who estimates the whole number of English words at 38,000, assigns 23,000 to a Saxon, and 15,000 to a classical source. On taking, however, a more accurate inventory, and counting every word in the dictionaries of Robertson and Webster, M. Thommerel has established the fact that of the sum total of 43,566 words, 29,853 came from classical, 13,230 from Teutonic, and the rest from miscellaneous sources.¹ On the

¹ Some excellent statistics on the exact proportion of Saxon and Latin in various English writers, are to be found in Marsh's *Lectures on the English Language*, p. 120, *seq.* and 181, *seq.*

evidence of its dictionary, therefore, and treating English as a mixed language, it would have to be classified together with French, Italian, and Spanish, as one of the Romance or Neo-Latin dialects. Languages, however, though mixed in their dictionary, can never be mixed in their grammar. Hervas was told by missionaries that in the middle of the eighteenth century the Araucans used hardly a single word which was not Spanish, though they preserved both the grammar and the syntax of their own native speech.¹ This is the reason why grammar is made the criterion of the relationship and the base of the classification in almost all languages; and it follows, therefore, as a matter of course, that in the classification and in the science of language, it is impossible to admit the existence of a mixed idiom. We may form whole sentences in English consisting entirely of Latin or Romance words; yet whatever there is left of grammar in English bears unmistakable traces of Teutonic workmanship. What may now be called grammar in English is little more than the terminations of the genitive singular, and nominative plural of nouns, the degrees of comparison, and a few of the persons and tenses of the verb. Yet the single *s*, used as the exponent of the third person singular of the indicative present, is irrefragable evidence that in a scientific classification of languages, English, though it did not retain a single word of Saxon origin, would have

¹ "En este estado, que es el primer paso que las naciones dan para mudar de lengua, estaba quarenta años ha la araucana en las islas de Chiloue (como he oido á los jesuitas sus misioneros), en donde los araucanos apenas proferian palabra que no fuese española; mas la proferian con el artificio y órden de su lengua nativa, llamada araucana." — *Hervas, Catalogo*, t. i. p. 16. "Este artificio ha sido en mi observacion el principal medio de que me he valido para conocer la afinidad ó diferencia de las lenguas conocidas, y reducir las á determinadas classes." — *Ibid.*, p. 23.

to be classed as Saxon, and as a branch of the great Teutonic stem of the Aryan family of speech. In ancient and less matured languages, grammar, or the formal part of human speech, is far more abundantly developed than in English; and it is, therefore, a much safer guide for discovering a family likeness in scattered members of the same family. There are languages in which there is no trace of what we are accustomed to call grammar; for instance, ancient Chinese; there are others in which we can still watch the growth of grammar, or, more correctly, the gradual lapse of material into merely formal elements. In these languages new principles of classification will have to be applied, such as are suggested by the study of natural history; and we shall have to be satisfied with the criteria of a morphological affinity, instead of those of a genealogical relationship.

I have thus answered, I hope, some of the objections which threatened to deprive the science of language of that place which she claims in the circle of the physical sciences. We shall see in our next lecture what the history of our science has been from its beginning to the present day, and how far it may be said to have passed through the three stages, the empirical, the classificatory, and the theoretical, which mark the childhood, the youth, and the manhood of every one of the natural sciences.



LECTURE III.

THE EMPIRICAL STAGE.

WE begin to-day to trace the historical progress of the science of language in its three stages, the *Empirical*, the *Classificatory*, and the *Theoretical*. As a general rule each physical science begins with analysis, proceeds to classification, and ends with theory; but, as I pointed out in my first lecture, there are frequent exceptions to this rule, and it is by no means uncommon to find that philosophical speculations, which properly belong to the last or theoretical stage, were attempted in physical sciences long before the necessary evidence had been collected or arranged. Thus, we find that the science of language, in the only two countries where we can watch its origin and history—in India and Greece—rushes at once into theories about the mysterious nature of speech, and cares as little for facts as the man who wrote an account of the camel without ever having seen the animal or the desert. The Brahmans, in the hymns of the Veda, raised language to the rank of a deity, as they did with all things of which they knew not what they were. They addressed hymns to her in which she is said to have been with the gods from the beginning, achieving wondrous things, and never revealed to man except in part. In the Bráhmanas, language is called the

cow, breath the bull, and their young is said to be the mind of man.¹ Brahman, the highest being, is said to be known through speech, nay, speech herself is called the Supreme Brahman. At a very early period, however, the Brahmans recovered from their raptures about language, and set to work with wonderful skill dissecting her sacred body. Their achievements in grammatical analysis, which date from the sixth century, B. C., are still unsurpassed in the grammatical literature of any nation. The idea of reducing a whole language to a small number of roots, which in Europe was not attempted before the sixteenth century by Henry Estienne,² was perfectly familiar to the Brahmans, at least 500 B. C.

The Greeks, though they did not raise language to the rank of a deity, paid her, nevertheless, the greatest honors in their ancient schools of philosophy. There is hardly one of their representative philosophers who has not left some saying on the nature of language. The world without, or nature, and the world within, or mind, did not excite more wonder and elicit deeper oracles of wisdom from the ancient sages of Greece than language, the image of both, of nature and of

¹ Colebrooke, *Miscellaneous Essays*, i. 32. The following verses are pronounced by Vâch, the goddess of speech, in the 125th hymn of the 10th book of the Rig-Veda: "Even I myself say this (what is) welcome to Gods and to men: 'Whom I love, him I make strong, him I make a Brahman, him a great prophet, him I make wise. For Rudra (the god of thunder) I bend the bow, to slay the enemy, the hater of the Brahmans. For the people I make war; I pervade heaven and earth. I bear the father on the summit of this world; my origin is in the water in the sea; from thence I go forth among all beings, and touch this heaven with my height. I myself breathe forth like the wind, embracing all beings; above this heaven, beyond this earth, such am I in greatness.'" See also *Atharva-Veda*, iv. 30; xix. 9, 3. Muir, *Sanskrit Texts*, part iii. pp. 103, 150.

² Sir John Stoddart, *Glossology*, p. 276.

mind. "What is language?" was a question asked quite as early as "What am I?" and, "What is all this world around me?" The problem of language was in fact a recognized battle-field for the different schools of ancient Greek philosophy, and we shall have to glance at their early guesses on the nature of human speech, when we come to consider the third or theoretical stage in the science of language.

At present, we have to look for the early traces of the first or empirical stage. And here it might seem doubtful what was the real work to be assigned to this stage. What can be meant by the empirical treatment of language? Who were the men that did for language what the sailor did for his stars, the miner for his minerals, the gardener for his flowers? Who was the first to give any thought to language? — to distinguish between its component parts, between nouns and verbs, between articles and pronouns, between the nominative and accusative, the active and passive? Who invented these terms, and for what purpose were they invented?

We must be careful in answering these questions, for, as I said before, the merely empirical analysis of language was preceded in Greece by more general inquiries into the nature of thought and language; and the result has been that many of the technical terms which form the nomenclature of empirical grammar, existed in the schools of philosophy long before they were handed over, ready made, to the grammarian. The distinction of noun and verb, or more correctly, of subject and predicate, was the work of philosophers. Even the technical terms of case, of number, and gender, were coined at a very early time for the purpose

of entering into the nature of thought ; not for the practical purpose of analyzing the forms of language. This, their practical application to the spoken language of Greece, was the work of a later generation. It was the teacher of languages who first compared the categories of thought with the realities of the Greek language. It was he who transferred the terminology of Aristotle and the Stoics from thought to speech, from logic to grammar ; and thus opened the first roads into the impervious wilderness of spoken speech. In doing this, the grammarian had to alter the strict acceptance of many of the terms which he borrowed from the philosopher, and he had to coin others before he could lay hold of all the facts of language even in the roughest manner. For, indeed, the distinction between noun and verb, between active and passive, between nominative and accusative, does not help us much towards a scientific analysis of language. It is no more than a first grasp, and it can only be compared with the most elementary terminology in other branches of human knowledge. Nevertheless, it was a beginning, a very important beginning ; and if we preserve in our histories of the world the names of those who are said to have discovered the four physical elements, the names of a Thales and Anaximenes, we ought not to forget the names of the discoverers of the elements of language — the founders of one of the most useful and most successful branches of philosophy — the first Grammarians.

Grammar then, in the usual sense of the word, or the merely formal and empirical analysis of language, owes its origin, like all other sciences, to a very natural and practical want. The first practical grammarian

was the first practical teacher of languages, and if we want to know the beginnings of the science of language, we must try to find out at what time in the history of the world, and under what circumstances, people first thought of learning any language besides their own. At *that* time we shall find the first practical grammar, and not till then. Much may have been ready at hand through the less interested researches of philosophers, and likewise through the critical studies of the scholars of Alexandria on the ancient forms of their language as preserved in the Homeric poems. But rules of declension and conjugation, paradigms of regular and irregular nouns and verbs, observations on syntax, and the like, these are the work of the teachers of languages, and of no one else.

Now, the teaching of languages, though at present so large a profession, is comparatively a very modern invention. No ancient Greek ever thought of learning a foreign language. Why should he? He divided the whole world into Greeks and Barbarians, and he would have felt himself degraded by adopting either the dress or the manners or the language of his barbarian neighbors. He considered it a privilege to speak Greek, and even dialects closely related to his own, were treated by him as mere jargons. It takes time before people conceive the idea that it is possible to express oneself in any but one's own language. The Poles called their neighbors, the Germans, *Niemiec*, *niemy* meaning *dumb*;¹ just as the Greeks called the Barbarians

¹ The Turks applied the Polish name *Niemiec* to the Austrians. As early as Constantinus Porphyrogeneta, cap. 30, *Νεμέτσοι* was used for the German race of the Bavarians. (Pott, Indo-Germ. Sp. s. 44. Leo, Zeitschrift für Vergleichende Sprachforschung, b. ii. s. 258.) Russian, *njemes'*; Slo-

Aglossoi, or speechless. The name which the Germans gave to their neighbors, the Celts, *Walk* in old High German, *vealh* in Anglo-Saxon, the modern *Welsh*, is supposed to be the same as the Sanskrit *mlechha*, and means a person who talks indistinctly.¹

Even when the Greeks began to feel the necessity of communicating with foreign nations, when they felt a desire of learning their idioms, the problem was by no means solved. For how was a foreign language to be learnt as long as either party could only speak their own? The problem was almost as difficult as when, as we are told by some persons, the first men, as yet speechless, came together in order to invent speech, and to discuss the most appropriate names that should be given to the perceptions of the senses and the abstractions of the mind. At first, it must be supposed that the Greek learned foreign languages very much as children learn their own. The interpreters mentioned by ancient historians were probably children of parents speaking different languages. The son of a Scythian and a Greek would naturally learn the utterances both of his father and mother, and the lucrative nature of his services would not fail to increase the supply. We are told, though on rather mythical authority, that the Greeks were astonished at the multiplicity of languages which they encountered during the Argonautic expedition, and that they were much inconvenienced by the want of skilful interpreters.² We need not wonder at this, for the

venian, *némec*; Bulgarian, *némec*; Polish, *niemiec*; Lusatian, *njemc*, mean German. Russian, *njemo*, indistinct; *njemyi*, dumb; Slovenian, *ném*, dumb; Bulgarian, *ném*, dumb; Polish, *njemy*, dumb; Lusatian, *njemy*, dumb.

¹ Leo, *Zeitschrift, für Vergl. Sprachf.* b. ii. s. 252.

² Humboldt's *Cosmos*, vol. ii. p. 141.

English army was hardly^{*} better off than the army of Jason ; and such is the variety of dialects spoken in the Caucasian Isthmus, that it is still called by the inhabitants "the Mountain of Languages." If we turn our eyes from these mythical ages to the historical times of Greece, we find that trade gave the first encouragement to the profession of interpreters. Herodotus tells us (iv. 24), that caravans of Greek merchants, following the course of the Volga upwards to the Oural mountains, were accompanied by seven interpreters, speaking seven different languages. These must have comprised Slavonic, Tataric, and Finnic dialects, spoken in those countries in the time of Herodotus, as they are at the present day. The wars with Persia first familiarized the Greeks with the idea that other nations also possessed real languages. Themistocles studied Persian, and is said to have spoken it fluently. The expedition of Alexander contributed still more powerfully to a knowledge of other nations and languages. But when Alexander went to converse with the Brahmans, who were even then considered by the Greeks as the guardians of a most ancient and mysterious wisdom, their answers had to be translated by so many interpreters that one of the Brahmans remarked, they must become like water that had passed through many impure channels.¹ We hear, indeed, of more ancient

¹ This shows how difficult it would be to admit that any influence was exercised by Indian on Greek philosophers. Pyrrhon, if we may believe Alexander Polyhistor, seems indeed to have accompanied Alexander on his expedition to India, and one feels tempted to connect the scepticism of Pyrrhon with the system of Buddhist philosophy then current in India. But the ignorance of the language on both sides must have been an insurmountable barrier between the Greek and the Indian thinkers. (*Fragmenta Histor. Græc.*, ed. Müller, t. iii. p. 243, b.; Lassen, *Indische Alterthumskunde*, b. iii. s. 380.)

Greek travellers, and it is difficult to understand how, in those early times, anybody could have travelled without a certain knowledge of the language of the people through whose camps and villages and towns he had to pass. Many of these travels, however, particularly those which are said to have extended as far as India, are mere inventions of later writers.¹ Lycurgus may have travelled to Spain and Africa, he certainly did not proceed to India, nor is there any mention of his intercourse with the Indian Gymnosophists before Aristocrates, who lived about 100 B. C. The travels of Pythagoras are equally mythical; they are inventions of Alexandrian writers, who believed that all wisdom must have flowed from the East. There is better authority for believing that Democritus went to Egypt and Babylon, but his more distant travels to India are likewise legendary. Herodotus, though he travelled in Egypt and Persia, never gives us to understand that he was able to converse in any but his own language.

As far as we can tell, the barbarians seem to have possessed a greater facility for acquiring languages than either Greeks or Romans. Soon after the Macedonian conquest, we find² *Berosus* in Babylon, *Menander* in Tyre, and *Manetho* in Egypt, compiling, from original sources, the annals of their countries.³ Their works

¹ On the supposed travels of Greek philosophers to India, see Lassen, *Indische Alterthumskunde*, b. iii. s. 379; Brandis, *Handbuch der Geschichte der Philosophie*, b. i. s. 425. The opinion of D. Stewart and Niebuhr that the Indian philosophers borrowed from the Greeks, and that of Görres and others that the Greeks borrowed from the Brahmins, are examined in my *Essay on Indian Logic*, in Thomson's *Laws of Thought*.

² See Niebuhr, *Vorlesungen über Alte Geschichte*, b. i. s. 17.

³ The translation of Mago's work on agriculture belongs to a later time. There is no proof that Mago, who wrote twenty-eight books on agriculture

were written in Greek, and for the Greeks. The native language of Berosus was Babylonian, of Menander Phenician, of Manetho Egyptian. Berosus was able to read the cuneiform documents of Babylonia with the same ease with which Manetho read the papyri of Egypt. The almost contemporaneous appearance of three such men, barbarians by birth and language, who were anxious to save the histories of their countries from total oblivion, by entrusting them to the keeping of their conquerors, the Greeks, is highly significant. But what is likewise significant, and by no means creditable to the Greek or Macedonian conquerors, is the small value which they seem to have set on these works. They have all been lost, and are known to us by fragments only, though there can be little doubt that the work of Berosus would have been an invaluable guide to the student of the cuneiform inscriptions and of Babylonian history, and that Manetho, if preserved complete, would have saved us volumes of controversy on Egyptian chronology. We learn, however, from the almost simultaneous appearance of these works, that soon after the epoch marked by Alexander's conquests in the East, the Greek language was studied and cultivated by literary men of barbarian origin, though we should look in vain for any Greek

in the Punic language, lived, as Humboldt supposes (*Cosmos*, vol. ii. p. 184), 500 B. C. Varro de R. R. i. 1, says: "*Hos nobilitate Mago Carthaginiensis præterit Poenica lingua, quod res dispersas comprehendit libris xxix., quos Cassius Dionysius Uticensis vertit libris xx., Græca lingua, ac Sextilio prætori misit: in quæ volumina de Græcis libris eorum quos dixi adjecit non pauca, et de Magonis dempsit instar librorum viii. Hosce ipsos utiliter ad vi. libros redegit Diophanes in Bithynia, et misit Dejotaro regi.*" This Cassius Dionysius Uticensis lived about 40 B. C. The translation into Latin was made at the command of the Senate, shortly after the third Punic war.

learning or employing any but his own tongue for literary purposes. We hear of no intellectual intercourse between Greeks and barbarians before the days of Alexander and Alexandria. At Alexandria, various nations, speaking different languages, and believing in different gods, were brought together. Though primarily engaged in mercantile speculations, it was but natural that in their moments of leisure they should hold discourse on their native countries, their gods, their kings, their law-givers, and poets. Besides, there were Greeks at Alexandria who were engaged in the study of antiquity, and who knew how to ask questions from men coming from any country of the world. The pretension of the Egyptians to a fabulous antiquity, the belief of the Jews in the sacred character of their laws, the faith of the Persians in the writings of Zoroaster, all these were fit subjects for discussion in the halls and libraries of Alexandria. We probably owe the translation of the Old Testament, the Septuagint, to this spirit of literary inquiry which was patronized at Alexandria by the Ptolemies.¹ The writings of Zoroaster also, the Zend-Avesta, would seem to have been rendered into Greek about the same time. For Hermippus, who is said by Pliny to have translated the writings of Zoroaster, was in all probability Hermippus,² the Peripatetic philosopher, the pupil of Callima-

¹ Ptolemæus Philadelphus (287-246 B. C.), on the recommendation of his chief librarian (Demetrius Philaretus), is said to have sent a Jew of the name of Aristeas, to Jerusalem, to ask the high priest for a MS. of the Bible, and for seventy interpreters. Others maintain that the Hellenistic Jews who lived at Alexandria, and who had almost forgotten their native language, had this translation made for their own benefit. Certain it is, that about the beginning of the third century B. C. (285), we find the Hebrew Bible translated into Greek.

² Plin. xxx. 2. "Sine dubio illa orta in Perside a Zoroastre, ut inter

chus, one of the most learned scholars at Alexandria.

But although we find at Alexandria these and similar traces of a general interest having been excited by the literatures of other nations, there is no evidence which would lead us to suppose that their languages also had become the subject of scientific inquiry. It was not through the study of other languages, but through the study of the ancient dialects of their own language, that the Greeks at Alexandria were first led to what we should call critical and philological studies. The critical study of Greek took its origin at Alexandria, and it was chiefly based on the text of Homer. The general outline of grammar existed, as I remarked before, at an earlier period. It grew up in the schools of Greek philosophers.¹ Plato knew of noun and verb as the two component parts of speech. Aristotle added conjunctions and articles. He likewise observed the distinctions of number and case. But neither Plato nor Aristotle paid much attention to the forms of language which corresponded to these forms of thought, nor had they any inducement to reduce them to any practical rules. With Aristotle the verb or *rhēma* is hardly more than predicate, and in sentences such as "the snow is white," he would have called *white* a

auctores convenit. Sed unus hic fuerit, an postea et alius, non satis constat. Eudoxus qui inter sapientiæ sectas clarissimam utilissimamque eam intelligi voluit, Zoroastrem hunc sex millibus annorum ante Platonis mortem fuisse prodidit. Sic et Aristoteles. Hermippus qui de tota ea arte diligentissime scripsit, et vices centum millia versuum a Zoroastre condita, indicibus quoque voluminum ejus positis explanavit, præceptorem a quo institutum disceret, tradidit Azonacem, ipsum vero quinque millibus annorum ante Trojanum bellum fuisse." — "Diogenes Laertius Aristotelem auctorem facit libri τὸ Μαγικόν. Suidas librum cognovit, dubitat vero a quo scriptus sit." See Bunsen's *Egypten*, Va, 101.

¹ M. M.'s *History of Ancient Sanskrit Literature*, p. 163.

verb. The first who reduced the actual forms of language to something like order were the scholars of Alexandria. Their chief occupation was to publish correct texts of the Greek classics, and particularly of Homer. They were forced, therefore, to pay attention to the exact forms of Greek grammar. The MSS. sent to Alexandria and Pergamus from different parts of Greece varied considerably, and it could only be determined by careful observation which forms were to be tolerated in Homer and which were not. Their editions of Homer were not only *ekdoseis*, a Greek word literally rendered in Latin by *editio*, i. e. issues of books, but *diorthōseis*, that is to say, critical editions. There were different schools, opposed to each other in their views of the language of Homer. Each reading that was adopted by Zenodotus or Aristarchus had to be defended, and this could only be done by establishing general rules on the grammar of the Homeric poems. Did Homer use the article? Did he use it before proper names? These and similar questions had to be settled, and as one or the other view was adopted by the editors, the text of these ancient poems was changed by more or less violent emendations. New technical terms were required for distinguishing, for instance, the article, if once recognized, from the demonstrative pronoun. *Article* is a literal translation of the Greek word *arthron*. *Arthron* (Lat. *artus*) means the socket of a joint. The word was first used by Aristotle, and with him it could only mean words which formed, as it were, the sockets in which the members of a sentence moved. In such a sentence as: "Whoever did it, he shall suffer for it," Greek grammarians would have called the demonstrative pronoun *he* the first socket,

and the relative pronoun *who*, the second socket;¹ and before Zenodotus, the first librarian of Alexandria, 250 B. C., all pronouns were simply classed as sockets or articles of speech. He was the first to introduce a distinction between personal pronouns or *antonymiai*, and the mere articles or articulations of speech, which henceforth retained the name of *arthra*. This distinction was very necessary, and it was, no doubt, suggested to him by his emendations of the text of Homer, Zenodotus being the first who restored the article before proper names in the Iliad and Odyssey. Who, in speaking now of the definite or indefinite article, thinks of the origin and original meaning of the word, and of the time which it took before it could become what it is now, a technical term familiar to every school-boy?

Again, to take another illustration of the influence which the critical study of Homer at Alexandria exercised on the development of grammatical terminology,—we see that the first idea of numbers, of a singular and a plural, was fixed and defined by the philosopher. But Aristotle had no such technical terms as singular and plural; and he does not even allude to the dual. He only speaks of the cases which express one or many, though with him *case*, or *ptōsis*, had a very different meaning from what it has in our grammars. The terms singular and plural were not invented till they were wanted, and they were first wanted by the grammarians. Zenodotus, the editor of Homer, was the first to observe the use of the dual in the Homeric poems, and, with the usual zeal of discoverers, he has altered many a plural into a dual when there was no necessity for it.

¹ ἄρθρον προτασσόμενον, ἄρθρον ὑποτασσόμενον.

The scholars of Alexandria, therefore, and of the rival academy of Pergamus, were the first who studied the Greek language critically, that is to say, who analyzed the language, arranged it under general categories, distinguished the various parts of speech, invented proper technical terms for the various functions of words, observed the more or less correct usage of certain poets, marked the difference between obsolete and classical forms, and published long and learned treatises on all these subjects. Their works mark a great era in the history of the science of language. But there was still a step to be made before we can expect to meet with a real practical or elementary grammar of the Greek language. Now the first real Greek grammar was that of *Dionysius Thrax*. It is still in existence, and though its genuineness has been doubted, these doubts have been completely disposed of.

But who was Dionysius Thrax? His father, as we learn from his name, was a Thracian; but Dionysius himself lived at Alexandria, and was a pupil of the famous critic and editor of Homer, Aristarchus.¹ Dionysius afterwards went to Rome, where he taught about the time of Pompey. Now here we see a new feature in the history of mankind. A Greek, a pupil of Aristarchus, settles at Rome, and writes a practical grammar of the Greek language — of course, for the benefit of his young Roman pupils. He was not the inventor of grammatical science. Nearly all the framework of grammar, as we saw, was supplied to him through the labors of his predecessors from Plato to

¹ Suidas, s. v. Διονύσιος. Διονύσιος Ἀλεξανδρεὺς, Θράξ δὲ ἀπὸ πατρὸς τὸννομα κληθεὶς, Ἀριστάρχου μαθητὴς, γραμματικὸς ὃς ἐσοφίστευσεν ἐν Ῥώμῃ ἐπὶ Πομπηίου τοῦ Μεγάλου.

Aristarchus. But he was the first who applied the results of former philosophers and critics to the practical purpose of teaching Greek; and, what is most important, of teaching Greek not to Greeks, who knew Greek and only wanted the theory of their language, but to Romans who had to be taught the declensions and conjugations, regular and irregular. His work thus became one of the principal channels through which the grammatical terminology, which had been carried from Athens to Alexandria, flowed back to Rome, to spread from thence over the whole civilized world.

Dionysius, however, though the author of the first practical grammar, was by no means the first "*professeur de langue*" who settled at Rome. At his time Greek was more generally spoken at Rome than French is now spoken in London. The children of gentlemen learnt Greek before they learnt Latin, and though Quintilian in his work on education does not approve of a boy learning nothing but Greek for any length of time, "as is now the fashion," he says, "with most people," yet he too recommends that a boy should be taught Greek first, and Latin afterwards.¹ This may seem strange, but the fact is that as long as we know anything of Italy, the Greek language was as much at home there as Latin. Italy owed almost everything to Greece, not only in later days when the setting sun of Greek civilization mingled its rays with the dawn of Roman greatness; but ever since the first Greek colonists started Westward Ho! in search of new homes. It was from the Greeks that the Italians received their alphabet and were taught to read and to

¹ Quintilian, i. 1, 12.

write.¹ The names for balance, for measuring-rod, for engines in general, for coined money,² many terms connected with seafaring,³ not excepting *nausea* or sea-sickness, are all borrowed from Greek, and show the extent to which the Italians were indebted to the Greeks for the very rudiments of civilization. The Italians, no doubt, had their own national gods, but they soon became converts to the mythology of the Greeks. Some of the Greek gods they identified with their own; others they admitted as new deities. Thus *Saturnus*, originally an Italian harvest god, was identified with the Greek *Kronos*, and as *Kronos* was the son of *Uranos*, a new deity was invented, and *Saturnus* was fabled to be the son of *Cælus*. Thus the Italian *Herculus*, the god of hurdles, enclosures, and walls, was merged in the Greek *Heracles*.⁴ *Castor* and *Pollux*, both of purely Greek origin, were readily believed in as nautical deities by the Italian sailors, and they were the first Greek gods to whom, after the battle on the Lake Regillus (485), a temple was erected at Rome.⁵ In 431 another temple was erected at Rome to Apollo, whose oracle at Delphi had been consulted by Italians

¹ See Mommsen, *Römische Geschichte*, b. i. s. 197. "The Latin alphabet is the same as the modern alphabet of Sicily; the Etruscan is the same as the old Attic alphabet. *Epistola*, letter, *charta*, paper, and *stilus*, are words borrowed from Greek." — Mommsen, b. i. s. 184.

² Mommsen, *Römische Geschichte*, b. i. s. 186. *Statera*, the balance, the Greek *στατήρ*; *machina*, an engine, *μηχανή*; *numus*, a silver coin, *vómos*, the Sicilian *νοῦμμος*; *groma*, measuring-rod, the Greek *γνώμων* or *γνώμα*; *clathri*, a trellis, a grate, the Greek *κλήθρα*, the native Italian word for lock being *claustra*.

³ *Gubernare*, to steer, from *κυβερνᾶν*; *anchora*, anchor, from *ἄγκυρα*; *prora*, the forepart, from *πῶρα*. *Navis*, *remus*, *velum*, &c., are common Aryan words, not borrowed by the Romans from the Greeks, and show that the Italians were acquainted with navigation before the discovery of Italy by the Phœceans.

⁴ Mommsen, i. 154.

⁵ *Ibid.* i. 408.

ever since Greek colonists had settled on their soil. The oracles of the famous Sibylla of Cumæ were written in Greek,¹ and the priests (*duoviri sacris faciundis*) were allowed to keep two Greek slaves for the purpose of translating these oracles.²

When the Romans, in 454 B. C., wanted to establish a code of laws, the first thing they did was to send commissioners to Greece to report on the laws of Solon at Athens and the laws of other Greek towns.³ As Rome rose in political power, Greek manners, Greek art, Greek language and literature found ready admittance.⁴ Before the beginning of the Punic wars, many of the Roman statesmen were able to understand, and even to speak Greek. Boys were not only taught the Roman letters by their masters, the *litteratores*, but they had to learn at the same time the Greek alphabet. Those who taught Greek at Rome were then called *grammatici*, and they were mostly Greek slaves or *liberti*.

Among the young men whom Cato saw growing up at Rome, to know Greek was the same as to be a gentleman. They read Greek books, they conversed in Greek, they even wrote in Greek. Tiberius Gracchus, consul in 177, made a speech in Greek at Rhodes, which he afterwards published.⁵ Flaminius, when addressed by the Greeks in Latin, returned the compliment by writing Greek verses in honor of their

¹ Mommsen, i. 165.

² *Sibylla*, or *sibulla*, is a diminutive of an Italian *sabus* or *sabius*, wise; a word which, though not found in classical writers, must have existed in the Italian dialects. The French *sage* presupposes an Italian *sabius*, for it cannot be derived either from *sapiens* or from *sapius*. — *Dies, Lexicon Etymologicum*, p. 300. *Sapius* has been preserved in *nesapius*, foolish. *Sibulla* therefore meant a wise old woman.

³ Mommsen, i. 256.

⁴ *Ibid.* i. 425, 444.

⁵ *Ibid.* i. 857.

gods. The first history of Rome was written at Rome in Greek, by Fabius Pictor,¹ about 200 B. C.; and it was probably in opposition to this work, and to those of Lucius Cincius Alimentus, and Publius Scipio, that Cato wrote his own history of Rome in Latin. The example of the higher classes was eagerly followed by the lowest. The plays of Plautus are the best proof; for the affectation of using Greek words is as evident in some of his characters as the foolish display of French in the German writers of the eighteenth century. There was both loss and gain in the inheritance which Rome received from Greece; but what would Rome have been without her Greek masters? The very fathers of Roman literature were Greeks, private teachers, men who made a living by translating school-books and plays. Livius Andronicus, sent as prisoner of war from Tarentum (272 B. C.), established himself at Rome as professor of Greek. His translation of the *Odyssey* into Latin verse, which marks the beginning of Roman literature, was evidently written by him for the use of his private classes. His style, though clumsy and wooden in the extreme, was looked upon as a model of perfection by the rising poets of the capital. Nævius and Plautus were his cotemporaries and immediate successors. All the plays of Plautus were translations and adaptations of Greek originals; and Plautus was not even allowed to transfer the scene from Greece to Rome. The Roman public wanted to see Greek life and Greek depravity; it would have stoned the poet who had ventured to bring on the stage a Roman patrician or a Roman matron. Greek tragedies, also, were

¹ Mommsen, i. 902.

translated into Latin. Ennius, the cotemporary of Nævius and Plautus, though somewhat younger (239-169), was the first to translate Euripides. Ennius, like Andronicus, was an Italian Greek, who settled at Rome as a teacher of languages and translator of Greek. He was patronized by the liberal party, by Publius Scipio, Titus Flaminius, and Marcus Fulvius Nobilior.¹ He became a Roman citizen. But Ennius was more than a poet, more than a teacher of languages. He has been called a neologian, and to a certain extent he deserved that name. Two works written in the most hostile spirit against the religion of Greece, and against the very existence of the Greek gods, were translated by him into Latin.² One was the philosophy of *Epicharmus* (470 B. C., in Megara), who taught that Zeus was nothing but the air, and other gods but names of the powers of nature; the other the work of *Euhemerus*, of Messene (300 B. C.), who proved, in the form of a novel, that the Greek gods had never existed, and that those who were believed in as gods had been men. These two works were not translated without a purpose; and though themselves shallow in the extreme, they proved destructive to the still shallower systems of Roman theology. Greek became synonymous with infidel; and Ennius would hardly have escaped the punishment inflicted on Nævius for his political satires, had he not enjoyed the patronage and esteem of the most influential statesmen at Rome. Even Cato, the stubborn enemy of Greek philosophy³ and rhetoric, was a friend of the dangerous Ennius; and such was the growing influence of Greek at Rome, that Cato him-

¹ Mommsen, i. 892.² Ibid. i. 843, 194.³ Ibid. i. 911.

self had to learn it in his old age, in order to teach his boy what he considered, if not useful, at least harmless in Greek literature. It has been the custom to laugh at Cato for his dogged opposition to everything Greek ; but there was much truth in his denunciations. We have heard much of young Bengál — young Hindus who read Byron and Voltaire, play at billiards, drive tandems, laugh at their priests, patronize missionaries, and believe nothing. The description which Cato gives of the young idlers at Rome reminds us very much of young Bengál.

When Rome took the torch of knowledge from the dying hands of Greece, that torch was not burning with its brightest light. Plato and Aristotle had been succeeded by Chrysippus and Carneades ; Euripides and Menander had taken the place of Æschylus and Sophocles. In becoming the guardian of the Promethean spark first lighted in Greece, and intended hereafter to illuminate not only Italy, but every country of Europe, Rome lost much of that native virtue to which she owed her greatness. Roman frugality and gravity, Roman citizenship and patriotism, Roman purity and piety, were driven away by Greek luxury and levity, Greek intriguing and self-seeking, Greek vice and infidelity. Restrictions and anathemas were of no avail ; and Greek ideas were never so attractive as when they had been reprobated by Cato and his friends. Every new generation became more and more impregnated with Greek. In 131¹ we hear of a consul (Publius Crassus) who, like another Mezzofanti, was able to converse in the various dialects of Greek. Sulla allowed foreign ambassadors to speak Greek

¹ Mounmsen, ii. 407.

before the Roman senate.¹ The Stoic philosopher Panætius² lived in the house of the Scipios, which was for a long time the rendezvous of all the literary celebrities at Rome. Here the Greek historian Polybius, and the philosopher Cleitomachus, Lucilius the satirist, Terence the African poet (196–159), and the improvisatore Archias (102 B. C.), were welcome guests.³ In this select circle the master-works of Greek literature were read and criticised; the problems of Greek philosophy were discussed; and the highest interests of human life became the subject of thoughtful conversation. Though no poet of original genius arose from this society, it exercised a most powerful influence on the progress of Roman literature. It formed a tribunal of good taste; and much of the correctness, simplicity, and manliness of the classical Latin is due to that "Cosmopolitan Club," which met under the hospitable roof of the Scipios.

The religious life of Roman society at the close of the Punic wars was more Greek than Roman. All who had learnt to think seriously on religious questions were either Stoics or followers of Epicurus; or they embraced the doctrines of the New Academy, denying the possibility of any knowledge of the Infinite, and putting opinion in the place of truth.⁴ Though the doctrines of Epicurus and the New Academy were always considered dangerous and heretical, the philosophy of the Stoics was tolerated, and a kind of compromise effected between philosophy and religion. There was a state-philosophy as well as a state-

¹ Mommsen, ii. 410. ² Ibid. ii. 408. ³ Ibid. ii. 437, note; ii. 430.

⁴ Zeno died 263; Epicurus died 270; Arcesilaus died 241; Carneades died 129.

religion. The Roman priesthood, though they had succeeded, in 161, in getting all Greek rhetors and philosophers expelled from Rome, perceived that a compromise was necessary. It was openly avowed that in the enlightened classes¹ philosophy must take the place of religion, but that a belief in miracles and oracles was necessary for keeping the large masses in order. Even Cato,² the leader of the orthodox, national, and conservative party, expressed his surprise that a haruspex, when meeting a colleague, did not burst out laughing. Men like Scipio Æmilianus and Lælius professed to believe in the popular gods; but with them Jupiter was the soul of the universe, the statues of the gods mere works of art.³ Their gods, as the people complained, had neither body, parts, nor passions. Peace, however, was preserved between the Stoic philosopher and the orthodox priest. Both parties professed to believe in the same gods, but they claimed the liberty to believe in them in their own way.

I have dwelt at some length on the changes in the intellectual atmosphere of Rome at the end of the Punic wars, and I have endeavored to show how completely it was impregnated with Greek ideas in order to explain, what otherwise would seem almost inexplicable, the zeal and earnestness with which the study of Greek grammar was taken up at Rome, not only by a few scholars and philosophers, but by the leading statesmen of the time. To our minds, discussions on nouns and verbs, on cases and gender, on regular and irregular conjugation, retain always something of the tedious character which these subjects

¹ Mommsen, ii. 417, 418.

² Ibid. i. 845.

³ Ibid. ii. 415, 417.

had at school, and we can hardly understand how at Rome, grammar — pure and simple grammar — should have formed a subject of general interest, and a topic of fashionable conversation. When one of the first grammarians of the day, Crates of Pergamus, was sent to Rome as ambassador of King Attalus, he was received with the greatest distinction by all the literary statesmen of the capital. It so happened that when walking one day on the Palatian hill, Crates caught his foot in the grating of a sewer, fell and broke his leg. Being thereby detained at Rome longer than he intended, he was persuaded to give some public lectures, or *akroaseis*, on grammar; and from these lectures, says Suetonius, dates the study of grammar at Rome. This took place about 159 B. C., between the second and third Punic wars, shortly after the death of Ennius, and two years after the famous expulsion of the Greek rhetors and philosophers (161). Four years later Carneades, likewise sent to Rome as ambassador, was prohibited from lecturing by Cato. After these lectures of Crates, grammatical and philological studies became extremely popular at Rome. We hear of Lucius Ælius Stilo,¹ who lectured on Latin as Crates had lectured on Greek. Among his pupils were Varro, Lucilius, and Cicero. Varro composed twenty-four books on the Latin language, four of which were dedicated to Cicero. Cicero, himself, is quoted as an authority on grammatical questions, though we know of no special work of his on grammar. Lucilius devoted the ninth book of his satires to the reform of spelling.² But nothing shows

¹ Mommsen, ii. 413, 426, 445, 457. Lucius Ælius Stilo wrote a work on etymology, and an index to Plautus. — Lersch, *Die Sprachphilosophie der Alten*, ii. 111.

² Lersch, ii. 113, 114, 143.

more clearly the wide interest which grammatical studies had then excited in the foremost ranks of Roman society than Cæsar's work on Latin grammar. It was composed by him during the Gallic war, and dedicated to Cicero, who might well be proud of the compliment thus paid him by the great general and statesman. Most of these works are lost to us, and we can judge of them only by means of casual quotations. Thus we learn from a fragment of Cæsar's work, *De analogia*, that he was the inventor of the term *ablative* in Latin. The word never occurs before, and, of course, could not be borrowed, like the names of the other cases, from Greek grammarians, as they admitted no ablative in Greek. To think of Cæsar fighting the barbarians of Gaul and Germany, and watching from a distance the political complications at Rome, ready to grasp the sceptre of the world, and at the same time carrying on his philological and grammatical studies together with his secretary, the Greek Didymus,¹ gives us a new view both of that extraordinary man, and of the time in which he lived. After Cæsar had triumphed, one of his favorite plans was to found a Greek and Latin library at Rome, and he offered the librarianship to the best scholar of the day, to Varro, though Varro had fought against him on the side of Pompey.²

We have thus arrived at the time when, as we saw in an earlier part of this lecture, Dionysius Thrax published the first elementary grammar of Greek at Rome. Empirical grammar had thus been transplanted to Rome, the Greek grammatical terminology was translated into Latin, and in this new Latin garb it has travelled now for nearly two thousand years over the whole civilized world.

¹ Lersch, iii. 144.

² Mommsen, iii. 557. 48 B. C.

Even in India, where a different terminology had grown up in the grammatical schools of the Brahmans, a terminology in some respects more perfect than that of Alexandria and Rome, we may now hear such words as *case*, and *gender*, and *active* and *passive*, explained by European teachers to their native pupils. The fates of words are curious indeed, and when I looked the other day at some of the examination papers of the government schools in India, such questions as — “Write the genitive case of Siva,” seemed to reduce whole volumes of history into a single sentence. How did these words, genitive case, come to India? They came from England, they had come to England from Rome, to Rome from Alexandria, to Alexandria from Athens. At Athens, the term *case*, or *ptōsis*, had a philosophical meaning; at Rome, *casus* was merely a literal translation; the original meaning of *fall* was lost, and the word dwindled down to a mere technical term. At Athens, the philosophy of language was a counterpart of the philosophy of the mind. The terminology of formal logic and formal grammar was the same. The logic of the Stoics was divided into two parts,¹ called *rhetoric* and *dialectic*, and the latter treated, first, “On that which signifies, or language;” secondly, “On that which is signified, or things.” In their philosophical language *ptōsis*, which the Romans translated by *casus*, really meant *fall*; that is to say, the inclination or relation of one idea to another, the falling or resting of one word on another. Long and angry discussions were carried on as to whether the name of *ptōsis*, or *fall*, was applicable to the nominative; and every true Stoic

¹ Lersch, ii. 25. Περὶ σημαίνοντων, or περὶ φώνης; and περὶ σημαίνοντων, or περὶ πραγμάτων.

would have scouted the expression of *casus rectus*, because the subject or the nominative, as they argued, did not fall or rest on anything else, but stood erect, the other words of a sentence leaning or depending on it. All this is lost to us when we speak of cases.

And how are the dark scholars in the government schools of India to guess the meaning of *genitive*? The Latin *genitivus* is a mere blunder, for the Greek word *genikē* could never mean *genitivus*. *Genitivus*, if it is meant to express the case of origin or birth, would in Greek have been called *gennētikē*, not *genikē*. Nor does the genitive express the relation of son to father. For though we may say, "the son of the father," we may likewise say, "the father of the son." *Genikē*, in Greek, had a much wider, a much more philosophical meaning.¹ It meant *casus generalis*, the general case, or rather the case which expresses the genus or kind. This is the real power of the genitive. If I say, "a bird of the water," "of the water" defines the genus to which a certain bird belongs; it refers it to the genus of water-birds. "Man of the mountains," means a mountaineer. In phrases such as "son of the father," or "father of the son," the genitives have the same effect. They predicate something of the son or of the father; and if we distinguished between the sons of the father, and the sons of the mother, the genitives would mark the class or genus to which the sons respectively belonged. They would answer the same purpose as the adjectives, paternal and maternal. It can be proved etymologically that the termination of the genitive is, in most cases, identical with those derivative

¹ Beiträge zur Geschichte der Grammatik, von Dr. K. E. A. Schmidt. Halle, 1859. Über den Begriff der γενική πτώσις, s. 320.

suffixes by which substantives are changed into adjectives.¹

It is hardly necessary to trace the history of what I call the empirical study, or the grammatical analysis of language, beyond Rome. With Dionysius Thrax the

¹ In the Tibetan languages the rule is, "Adjectives are formed from substantives by the addition of the genitive sign," which might be inverted into, "The genitive is formed from the nominative by the addition of the adjective sign." For instance, *shing*, wood; *shing gi*, of wood, or wooden: *ser*, gold; *ser-gyi*, of gold, or golden: *mi*, man; *mi-yi*, of man, or human. The same in Garo, where the sign of the genitive is *ni*, we have; *mánde-ni jak*, the hand of man, or the human hand; *ambal-ni kettháí*, a wooden knife, or a knife of wood. In Hindustání the genitive is so clearly an adjective, that it actually takes the marks of gender according to the words to which it refers. But how is it in Sanskrit and Greek? In Sanskrit we may form adjectives by the addition of *tya*. (Turanian Languages, p. 41, *seq.*; Essay on Bengálí, p. 333.) For instance, *dakshind*, south; *dakshind-tya*, southern. This *tya* is clearly a demonstrative pronoun, the same as the Sanskrit *syas*, *syá*, *tyad*, this or that. *Tya* is a pronominal base, and therefore such adjectives as *dakshind-tya*, southern, or *áp-tya*, aquatic, from *áp*, water, must have been conceived originally as "water-there," or "south-there." Followed by the terminations of the nominative singular, which was again an original pronoun, *áptyas* would mean *áp-tya-s*, i. e., water-there-he. Now, it makes little difference whether I say an aquatic bird or a bird of the water. In Sanskrit the genitive of water would be, if we take *udaka*, *udaka-sya*. This *sya* is the same pronominal base as the adjective termination *tya*, only that the former takes no sign for the gender, like the adjective. The genitive *udakasya* is therefore the same as an adjective without gender. Now let us look to Greek. We there form adjectives by *ιος*, which is the same as the Sanskrit *tya* or *sya*. For instance, from *ἄνθρωπος*, people, the Greeks formed *ἀνθρώπιος*, belonging to the people. Here *ος*, *α*, *ον*, mark the gender. Leave the gender out, and you get *ἀνθρώπου*. Now, there is a rule in Greek that an *ς* between two vowels, in grammatical terminations, is elided. Thus the genitive of *γένος* is not *γένεος*, but *γένους*, or *γένου*; hence *ἀνθρώπου* would necessarily become *ἄνθρωπο*. And what is *ἄνθρωπο* but the regular Homeric genitive of *ἄνθρωπος*, which in later Greek was replaced by *ἄνθρωπον*? Thus we see that the same principles which governed the formation of adjectives and genitives in Tibetan, in Garo, and Hindustání, were at work in the primitive stages of Sanskrit and Greek; and we perceive how accurately the real power of the genitive was determined by the ancient Greek grammarians, who called it the general or predicative case, whereas the Romans spoiled the term by wrongly translating it into *genitivus*.

framework of grammar was finished. Later writers have improved and completed it, but they have added nothing really new and original. We can follow the stream of grammatical science from Dionysius Thrax to our own time in an almost uninterrupted chain of Greek and Roman writers. We find Quintilian in the first century ; Scaurus, Apollonius Dyscolus, and his son, Herodianus, in the second ; Probus and Donatus in the fourth. After Constantine had moved the seat of government from Rome, grammatical science received a new home in the academy of Constantinople. There were no less than twenty Greek and Latin grammarians who held professorships at Constantinople. Under Justinian, in the sixth century, the name of Priscianus gave a new lustre to grammatical studies, and his work remained an authority during the Middle Ages to nearly our own times. We ourselves have been taught grammar according to the plan which was followed by Dionysius at Rome, by Priscianus at Constantinople, by Alcuin at York ; and whatever may be said of the improvements introduced into our system of education, the Greek and Latin grammars used at our public schools are mainly founded on the first empirical analysis of language, prepared by the philosophers of Athens, applied by the scholars of Alexandria, and transferred to the practical purpose of teaching a foreign tongue by the Greek professors at Rome.



LECTURE IV.

THE CLASSIFICATORY STAGE.

WE traced, in our last lecture, the origin and progress of the empirical study of languages from the time of Plato and Aristotle to our own school-boy days. We saw at what time, and under what circumstances, the first grammatical analysis of language took place; how its component parts, the parts of speech, were named, and how, with the aid of a terminology, half philosophical and half empirical, a system of teaching languages was established, which, whatever we may think of its intrinsic value, has certainly answered that purpose for which it was chiefly intended.

Considering the process by which this system of grammatical science was elaborated, it could not be expected to give us an insight into the nature of language. The division into nouns and verbs, articles and conjunctions, the schemes of declension and conjugation, were a merely artificial network thrown over the living body of language. We must not look in the grammar of Dionysius Thrax for a correct and well-articulated skeleton of human speech. It is curious, however, to observe the striking coincidences between the grammatical terminology of the Greeks and the Hindús, which would seem to prove that there must be some true and natural foundation for the much-

abused grammatical system of the schools. The Hindús are the only nation that cultivated the science of grammar without having received any impulse, directly or indirectly, from the Greeks. Yet we find in Sanskrit too the same system of cases, called *vibhakti*, or inflections, the active, passive, and middle voices, the tenses, moods, and persons, divided not exactly, but very nearly, in the same manner as in Greek.¹ In Sanskrit, grammar is called *vyākaraṇa*, which means analysis or taking to pieces. As Greek grammar owed its origin to the critical study of Homer, Sanskrit grammar arose from the study of the Vedas, the most ancient poetry of the Brahmans. The differences between the dialect of these sacred hymns and the literary Sanskrit of later ages were noted and preserved with a religious care. We still possess the first essays in the grammatical science of the Brahmans, the so-called *prātiśākhya*s. These works, though they merely profess to give rules on the proper pronunciation of the ancient dialect of the Vedas, furnish us at the same time with observations of a grammatical character, and particularly with those valuable lists of words, irregular or in any other way remarkable, the *Gaṇas*. These supplied that solid basis on which successive generations of scholars erected the astounding structure that reached its perfection in the grammar of Pāṇini. There is no form, regular or irregular, in the whole Sanskrit language, which is not provided for in the grammar of Pāṇini and his commentators. It is the perfection of a merely empirical analysis of language, unsurpassed, nay even unapproached, by anything in the grammatical literature of other nations. Yet of

¹ See M. M.'s History of Ancient Sanskrit Literature, p. 158.

the real nature, and natural growth of language, it teaches us nothing.

What then do we know of language after we have learnt the grammar of Greek or Sanskrit, or after we have transferred the network of classical grammar to our own tongue?

We know certain forms of language which correspond to certain forms of thought. We know that the subject must assume the form of the nominative, the object that of the accusative. We know that the more remote object may be put in the dative, and that the predicate, in its most general form, may be rendered by the genitive. We are taught that whereas in English the genitive is marked by a final *s*, or by the preposition *of*, it is in Greek expressed by a final *os*, in Latin by *is*. But what this *os* and *is* represent, why they should have the power of changing a nominative into a genitive, a subject into a predicate, remains a riddle. It is self-evident that each language, in order to be a language, must be able to distinguish the subject from the object, the nominative from the accusative. But how a mere change of termination should suffice to convey so material a distinction would seem almost incomprehensible. If we look for a moment beyond Greek and Latin, we see that there are in reality but few languages which have distinct forms for these two categories of thought. Even in Greek and Latin there is no outward distinction between the nominative and accusative of neuters. The Chinese language, it is commonly said, has no grammar at all, that is to say, it has no inflections, no declension and conjugation, in our sense of these words; it makes no formal distinction of the various parts of speech, noun,

verb, adjective, adverb, &c. Yet there is no shade of thought that cannot be rendered in Chinese. The Chinese have no more difficulty in distinguishing between "James beats John," and "John beats James," than the Greeks and Romans or we ourselves. They have no termination for the accusative, but they attain the same by always placing the subject before, and the object after the verb, or by employing words, before or after the noun, which clearly indicate that it is to be taken as the object of the verb.¹ There are other lan-

¹ The following and some other notes were kindly sent to me by the first Chinese scholar in Europe, M. Stanislas Julien, Membre de l'Institut.

The Chinese do not decline their substantives, but they indicate the cases distinctly —

A. By means of particles.

B. By means of position.

1. The nominative or the subject of a sentence is always placed at the beginning.

2. The genitive may be marked —

(a) By the particle *tchi* placed between the two nouns, of which the first is in the genitive, the second in the nominative. Example, *jin tchi kin* (hominum princeps, literally, man, sign of the genitive, prince.)

(b) By position, placing the word which is in the genitive first, and the word which is in the nominative second. Ex. *koue* (kingdom) *jin* (man) i. e., a man of the kingdom.

3. The dative may be expressed —

(a) By the preposition *yu*, to. Ex. *sse* (to give) *yen* (money) *yu* (to) *jin* (man).

(b) By position, placing first the verb, then the word which stands in the dative, lastly, the word which stands in the accusative. Ex. *yu* (to give) *jin* (to a man) *pe* (white) *yu* (jade), *hoang* (yellow) *kin* (metal), i. e., gold.

4. The accusative is either left without any mark, for instance, *pao* (to protect) *min* (the people), or it is preceded by certain words which had originally a more tangible meaning, but gradually dwindled away into mere signs of the accusative. [These were first discovered and correctly explained by M. Stanislas Julien in his *Vindiciæ Philologicæ in Linguam Sinicam*, Paris, 1830.] The particles most frequently used for this purpose by modern writers are *pa* and *tsiang*, to grasp, to take. Ex. *pa* (taking) *tchoung-jin* (crowd of men) *t'eu* (secretly) *k'an* (he looked) i. e., he looked secretly at the crowd of men (hominum turbam furtim aspiciebat). In the more ancient Chinese (*Kouwen*) the words used for the same purpose are *i* (to employ, etc.), *iu*, *iu*, *kou*. Ex. *i* (employing) *jin* (mankind) *t'san* (he

guages which have more terminations even than Greek and Latin. In Finnish there are fifteen cases, expressive of every possible relation between the subject and the object; but there is no accusative, no purely objective case. In English and French the distinctive terminations of the nominative and accusative have been worn off by phonetic corruption, and these languages are obliged, like Chinese, to mark the subject and object by the collocation of words. What we learn therefore at school in being taught that *rex* in the nominative becomes *regem* in the accusative, is simply a practical rule. We know when to say *rex*, and when to say *regem*. But why the king as a subject should be called *rex*, and as an object *regem*, remains entirely

preserves) *sin* (in the heart), i. e., *humanitatem conservat corde*. *I* (taking) *tchi* (right) *wéi* (to make) *k'io* (crooked), i. e., *rectum facere curvum*. *Pao* (to protect) *hou* (sign of accus.) *min* (the people).

5. The ablative is expressed —

(a) By means of prepositions, such as *thsong*, *yeou*, *tsen*, *hou*. Ex. *thsong* (ex) *thien* (cælo) *lai* (venire); *te* (obtinere) *hou* (ab) *thien* (cælo).

(b) By means of position, so that the word in the ablative is placed before the verb. Ex. *thien* (heaven) *hiang-tchi* (descended, *tchi* being the relative particle or sign of the genitive) *tsai* (calamities), i. e., the calamities which Heaven sends to men.

6. The instrumental is expressed —

(a) By the preposition *yu*, with. Ex. *yu* (with) *kien* (the sword) *cha* (to kill) *jin* (a man).

(b) By position, the substantive which stands in the instrumental case being placed before the verb, which is followed again by the noun in the accusative. Ex. *i* (by hanging) *cha* (he killed) *tchi* (him).

7. The locative may be expressed by simply placing the noun before the verb. Ex. *si* (in the East or East) *yeou* (there is) *suo-tou-po* (a sthupa); or by prepositions as described in the text.

The adjective is always placed before the substantive to which it belongs. Ex. *mai jin*, a beautiful woman.

The adverb is generally followed by a particle which produces the same effect as *e* in bene, or *ter* in celeriter. Ex. *cho-jen*, in silence, silently; *ngou-jen*, perchance; *kiu-jen*, with fear.

Sometimes an adjective becomes an adverb through position. Ex. *chen*, good; but *chen ko*, to sing well.

unexplained. In the same manner we learn that *amo* means I love, *amavi* I loved; but why that tragical change from *love* to *no love* should be represented by the simple change of *o* to *avi*, or, in English, by the addition of a mere *d*, is neither asked nor answered.

Now if there is a science of language, these are the questions which it will have to answer. If they cannot be answered, if we must be content with paradigms and rules, if the terminations of nouns and verbs must be looked upon either as conventional contrivances or as mysterious excrescences, there is no such thing as a science of language, and we must be satisfied with what has been called the art (*τέχνη*) of language, or grammar.

Before we either accept or decline the solution of any problem, it is right to determine what means there are for solving it. Beginning with English we should ask, what means have we for finding out why *I love* should mean I am actually loving, whereas *I loved* indicates that that feeling is past and gone? Or, if we look to languages richer in inflections than English, by what process can we discover under what circumstances *amo*, I love, was changed, through the mere addition of an *r*, into *amor*, expressing no longer *I love*, but *I am loved*? Did declensions and conjugations bud forth like the blossoms of a tree? Were they imparted to man ready made by some mysterious power? Or did some wise people invent them, assigning certain letters to certain phases of thought, as mathematicians express unknown quantities by freely chosen algebraic exponents? We are here brought at once face to face with the highest and most difficult problem of our science, the origin of language. But it will be well

for the present to turn our eyes away from theories, and fix our attention at first entirely on facts.

Let us keep to the English perfect, *I loved*, as compared with the present, *I love*. We cannot embrace at once the whole English grammar, but if we can track one form to its true lair, we shall probably have no difficulty in digging out the rest of the brood. Now, if we ask how the addition of a final *d* could express the momentous transition from being in love to being indifferent, the first thing we have to do, before attempting any explanation, would be to establish the earliest and most original form of *I loved*. This is a rule which even Plato recognized in his philosophy of language, though, we must confess, he seldom obeyed it. We know what havoc phonetic corruption may make both in the dictionary and the grammar of a language, and it would be a pity to waste our conjectures on formations which a mere reference to the history of language would suffice to explain. Now a very slight acquaintance with the history of the English language teaches us that the grammar of modern English is not the same as the grammar of Wycliffe. Wycliffe's English again may be traced back to what, with Sir Frederick Madden, we may call Middle English, from 1500 to 1330; Middle English to Early English, from 1330 to 1230; Early English to Semi-Saxon from 1230 to 1100; and Semi-Saxon to Anglo-Saxon.¹ It is evident that if we are to discover the original intention of the syllable which changes *I love* into *I loved*, we must consult the original form of that syllable wherever we can find it. We should never

¹ See some criticisms on this division in Marsh's *Lectures on the English Language*, p. 48.

have known that *priest* meant originally *an elder*, unless we had traced it back to its original form *presbyter*, in which a Greek scholar at once recognizes the comparative of *presbys*, old. If left to modern English alone, we might attempt to connect *priest* with *praying* or *preaching*, but we should not thus arrive at its true derivation. The modern word *Gospel* conveys no meaning at all. As soon as we trace it back to the original *Goddspell*, we see that it is a literal translation of *Evangelium*, or good news, good tidings.¹ *Lord* would be nothing but an empty title in English, unless we could discover its original form and meaning in the Anglo-Saxon *hlafford*, meaning a giver of bread, from *hlaf*, a loaf, and *ford*, to give.

But even after this is done, after we have traced a modern English word back to Anglo-Saxon, it follows by no means that we should there find it in its original form, or that we should succeed in forcing it to disclose its original intention. Anglo-Saxon is not an original or aboriginal language. It points by its very name to the Saxons and Angles of the continent. We have, therefore, to follow our word from Anglo-Saxon through the various Saxon and Low-German dialects, till we arrive at last at the earliest stage of German which is within our reach, the Gothic of the fourth century after Christ. Even here we cannot rest. For, although we cannot trace Gothic back to any earlier Teutonic language, we see at once that Gothic, too, is a modern language, and that it must have passed

¹ "Goddspell onn Ennglissh nemmedd iss
God word, annd god tiþennde,

God errnde," &c. — *Ormulum*, pref. 157.

"And beode þer godes godd-spel." — *Layamon*, iii. 182, v. 29,507.

through numerous phases of growth before it became what it is in the mouth of Bishop Ulfilas.

What then are we to do? — We must try to do what is done when we have to deal with the modern Romance languages. If we could not trace a French word back to Latin, we should look for its corresponding form in Italian, and endeavor to trace the Italian to its Latin source. If, for instance, we were doubtful about the origin of the French word for fire, *feu*, we have but to look to the Italian *fuoco*, in order to see at once that both *fuoco* and *feu* are derived from the Latin *focus*. We can do this, because we know that French and Italian are cognate dialects, and because we have ascertained beforehand the exact degree of relationship in which they stand to each other. Had we, instead of looking to Italian, looked to German for an explanation of the French *feu*, we should have missed the right track; for the German *feuer*, though more like *feu* than the Italian *fuoco*, could never have assumed in French the form *feu*.

Again, in the case of the preposition *hors*, which in French means *without*, we can more easily determine its origin after we have found that *hors* corresponds with the Italian *fuora*, the Spanish *fuera*. The French *fromage*, cheese, derives no light from Latin. But as soon as we compare the Italian *formaggio*,¹ we see that *formaggio* and *fromage* are derived from *forma*; cheese being made in Italy by keeping the milk in small baskets or forms. *Feeble*, the French *faible*, is clearly derived from Latin; but it is not till we see the Italian *fièvre* that we are reminded of the Latin *febilis*, tearful. We should never have found the etymol-

¹ Diez, *Lexicon Comparativum*. Columella, vii. 8.

ogy, that is to say the origin, of the French *payer*, the English *to pay*, if we did not consult the dictionary of the cognate dialects, such as Italian and Spanish. Here we find that *to pay* is expressed in Italian by *pagare*, in Spanish by *pagar*, whereas in Provençal we actually find the two forms *pagar* and *payar*. Now *pagar* clearly points back to Latin *pacare*, which means *to pacify, to appease*. To appease a creditor meant to pay him; in the same manner as *une quittance*, a quit-tance or receipt, was originally *quietantia*, a quieting, from *quietus*, quiet.

If, therefore, we wish to follow up our researches, — if, not satisfied with having traced an English word back to Gothic, we want to know what it was at a still earlier period of its growth, — we must determine whether there are any languages that stand to Gothic in the same relation in which Italian and Spanish stand to French; — we must restore, as far as possible, the genealogical tree of the various families of human speech. In doing this we enter on the second or classificatory stage of our science; for genealogy, where it is applicable, is the most perfect form of classification.

Before we proceed to examine the results which have been obtained by the recent labors of Schlegel, Humboldt, Bopp, Burnouf, Pott, Benfey, Prichard, Grimm, Kuhn, Curtius, and others in this branch of the science of language, it will be well to glance at what had been achieved before their time in the classification of the numberless dialects of mankind.

The Greeks never thought of applying the principle of classification to the varieties of human speech. They only distinguished between Greek on one side,

and all other languages on the other, comprehended under the convenient name of "Barbarous." They succeeded, indeed, in classifying four of their own dialects with tolerable correctness,¹ but they applied the term "barbarous" so promiscuously to the other more distant relatives of Greek, (the dialects of the Pelasgians, Carians, Macedonians, Thracians, and Illyrians,) that, for the purposes of scientific classification, it is almost impossible to make any use of the statements of ancient writers about these so-called barbarous idioms.²

¹ Strabo, viii. p. 833. Τὴν μὲν Ἰάδα τῇ παλαιᾷ Ἀττικίδι τὴν αὐτὴν φασίν, τὴν δὲ Δωρίδα τῇ Αἰολίδι.

² Herodotus (vii. 94, 509) gives Pelasgi as the old name of the Æolians and of the Ionians in the Peloponnesus and the islands. Nevertheless he argues (i. 57), from the dialect spoken in his time by the Pelasgi of the towns of Kreston, Plakia, and Skylake, that the old Pelasgi spoke a barbarous tongue (βάρβαρον τὴν γλώσσαν λέντες). He has, therefore, to admit that the Attic race, being originally Pelasgic, unlearned its language (τὸ Ἀττικὸν ἔθνος ἐκ Πελασγικόν, ὅμα τῇ μεταβολῇ τῇ ἐς Ἑλλήνας, καὶ τὴν γλώσσαν μετέμαθε). See Diefenbach, *Origines Europææ*, p. 59. Dionysius of Halicarnassus (i. 17) avoids this difficulty by declaring the Pelasgi to have been from the beginning a Hellenic race. This however, is merely his own theory. The *Karians* are called βαρβαρόφωνοι by Homer (Il. v. 867); but Strabo (xiv. 662) takes particular care to show that they are not therefore to be considered as βάρβαροι. He distinguishes between βαρβαρόφωνοι, i. e. κακῶς ἐλληνίζον, and Καρισὶ λαλεῖν, καρίζον καὶ βαρβαρίζον. But the same Strabo says that the Karians were formerly called Αἰελεγεῖς (xii. p. 572); and these, together with Pelasgians and Kaukones, are reckoned by him (vii. p. 321) as the earlier barbarous inhabitants of Hellas. Again he (vii. p. 321), as well as Aristotle and Dionysius of Halicarnassus (i. 17), considers the Locrians as descendants of the Leleges, though they would hardly call the Locrians barbarians.

The *Macedonians* are mentioned by Strabo (x. p. 460) together with "the other Hellenes." Demosthenes speaks of Alexander as a barbarian; Isokrates as a Heraclide. To judge from a few extant words, Macedonian might have been a Greek dialect. (Diefenbach, *Orig. Europ.* p. 62.) Justine (vii. 1) says of the Macedonians, "Populus Pelasgi, regio Pæonia dicebatur." There was a tradition that the country occupied by the Macedonians belonged formerly to Thracians or Pierians (Thuc. ii. 99; Strabo, vii. p. 321); part of it to Thessalians (ibid.).

Plato, indeed, in his *Cratylus* (c. 36), throws out a hint that the Greeks might have received their own words from the barbarians, the barbarians being older than the Greeks. But he was not able to see the full bearing of this remark. He only points out that some words, such as the names of *fire*, *water*, and *dog*, were the same in Phrygian and Greek; and he supposes that the Greeks borrowed them from the Phrygians (c. 26). The idea that the Greek language and that of the barbarians could have had a common source never entered his mind. It is strange that even so comprehensive a mind as that of Aristotle should have failed to perceive in languages some of that law and order which he tried to discover in every realm of nature. As Aristotle, however, did not attempt this, we need not wonder that it was not attempted by any one else for the next two thousand years. The Romans, in all scien-

The *Thracians* are called by Herodotus (v. 3) the greatest people after the Indians. They are distinguished by Strabo from Illyrians (Diefenbach, p. 65), from Celts (ibid.), and from Scythians (Thuc. ii. 96). What we know of their language rests on a statement of Strabo (vii. 303, 305), that the Thracians spoke the same language as the Getæ, and the Getæ the same as the Dacians. We possess fragments of Dacian speech in the botanical names collected by Dioskorides, and these, as interpreted by Grimm, are clearly Aryan, though not Greek. The Dacians are called barbarians by Strabo, together with Illyrians and Epirotes. (Strabo, vii. p. 321.)

The *Illyrians* were barbarians in the eyes of the Greeks. They are now considered as an independent branch of the Aryan family. Herodotus refers the Veneti to the Illyrians (i. 196); and the Veneti, according to Polybius (ii. 17), who knew them, spoke a language different from that of the Celts. He adds that they were an old race, and in their manner and dress like the Celts. Hence many writers have mistaken them for Celts, neglecting the criterion of language, on which Polybius lays such proper stress. The Illyrians were a widely extended race; the Pannonians, the Dalmatians, and the Dardanians (from whom the Dardanelles were called), are all spoken of as Illyrians. (Diefenbach, *Origines Europææ*, pp. 74, 75.) It is lost labor to try to extract anything positive from the statements of the Greeks and Romans on the race and the language of their barbarian neighbors.

tific matters, were merely the parrots of the Greeks. Having themselves been called barbarians, they soon learnt to apply the same name to all other nations, except, of course, to their masters, the Greeks. Now *barbarian* is one of those lazy expressions which seem to say everything but in reality say nothing. It was applied as recklessly as the word *heretic* during the Middle Ages. If the Romans had not received this convenient name of barbarian ready made for them, they would have treated their neighbors, the Celts and Germans, with more respect and sympathy: they would, at all events, have looked at them with a more discriminating eye. And, if they had done so, they would have discovered, in spite of outward differences, that these barbarians were, after all, not very distant cousins. There was as much similarity between the language of Cæsar and the barbarians against whom he fought in Gaul and Germany as there was between his language and that of Homer. A man of Cæsar's sagacity would have seen this, if he had not been blinded by traditional phraseology. I am not exaggerating. For let us look at one instance only. If we take a verb of such constant occurrence as *to have*, we shall find the paradigms almost identical in Latin and Gothic: —

I have	in Latin	is	habeo,	in Gothic	haba.
Thou hast	"		habes,	"	habais.
He has	"		habet,	"	habaiþ.
We have	"		habemus,	"	habam.
You have	"		habetis,	"	habaiþ.
They have	"		habent,	"	habant.

It surely required a certain amount of blindness, or rather of deafness, not to perceive such similarity, and

that blindness or deafness arose, I believe, entirely from the single word *barbarian*. Not till that word barbarian was struck out of the dictionary of mankind, and replaced by brother, not till the right of all nations of the world to be classed as members of one genus or kind was recognized, can we look even for the first beginnings of our science. This change was effected by Christianity. To the Hindú, every man not twice-born was a Mlechha; to the Greek, every man not speaking Greek was a barbarian; to the Jew, every person not circumcised was a Gentile; to the Mohammedan, every man not believing in the prophet is a Giaur or Kaffir. It was Christianity which first broke down the barriers between Jew and Gentile, between Greek and barbarian, between the white and the black. *Humanity* is a word which you look for in vain in Plato or Aristotle; the idea of mankind as one family, as the children of one God, is an idea of Christian growth; and the science of mankind, and of the languages of mankind, is a science which, without Christianity, would never have sprung into life. When people had been taught to look upon all men as brethren, then, and then only, did the variety of human speech present itself as a problem that called for a solution in the eyes of thoughtful observers; and I, therefore, date the real beginning of the science of language from the first day of Pentecost. After that day of cloven tongues a new light is spreading over the world, and objects rise into view which had been hidden from the eyes of the nations of antiquity. Old words assume a new meaning, old problems a new interest, old sciences a new purpose. The common origin of mankind, the differences of race and language, the susceptibility of

all nations of the highest mental culture, these become, in the new world in which we live, problems of scientific, because of more than scientific, interest. It is no valid objection that so many centuries should have elapsed before the spirit which Christianity infused into every branch of scientific inquiry produced visible results. We see in the oaken fleet which rides the ocean the small acorn which was buried in the ground hundreds of years ago, and we recognize in the philosophy of Albertus Magnus,¹ though nearly 1200 years after the death of Christ, in the aspirations of Kepler,² and in the researches of the greatest philosophers of our own age, the sound of that key-note of thought which had been struck for the first time by the apostle of the

¹ Albert, Count of Bollstädt, or, as he is more generally called, Albertus Magnus, the pioneer of modern physical science, wrote: "God has given to man His spirit, and with it also intellect, that man might use it for to know God. And God is known through the soul and by faith from the Bible, through the intellect from nature." And again: "It is to the praise and glory of God, and for the benefit of our brethren, that we study the nature of created things. In all of them, not only in the harmonious formation of every single creature, but likewise in the variety of different forms, we can and we ought to admire the majesty and wisdom of God."

² These are the last words in Kepler's "Harmony of the World," "Thou who by the light of nature hast kindled in us the longing after the light of Thy grace, in order to raise us to the light of Thy glory, thanks to Thee, Creator and Lord, that Thou lettest me rejoice in Thy works. Lo, I have done the work of my life with that power of intellect which Thou hast given. I have recorded to men the glory of Thy works, as far as my mind could comprehend their infinite majesty. My senses were awake to search as far as I could, with purity and faithfulness. If I, a worm before thine eyes, and born in the bonds of sin, have brought forth anything that is unworthy of Thy counsels, inspire me with Thy spirit, that I may correct it. If, by the wonderful beauty of Thy works, I have been led into boldness, if I have sought my own honor among men as I advanced in the work which was destined to Thine honor, pardon me in kindness and charity, and by Thy grace grant that my teaching may be to Thy glory, and the welfare of all men. Praise ye the Lord, ye heavenly Harmonies, and ye that understand the new harmonies, praise the Lord. Praise God, O my soul, as long as I live. From Him, through Him, and in Him is all, the

Gentiles :¹ “ *For the invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made, even His eternal power and Godhead.*”

But we shall see that the science of language owes more than its first impulse to Christianity. The pioneers of our science were those very apostles who were commanded “to go into all the world, and preach the Gospel to every creature,” and their true successors, the missionaries of the whole Christian Church. Translations of the Lord’s Prayer or of the Bible into every dialect of the world, form even now the most valuable materials for the comparative philologist. As long as the number of known languages was small, the idea of

material as well as the spiritual — all that we know and all that we know not yet — for there is much to do that is yet undone.”

These words are all the more remarkable, because written by a man who was persecuted by theologians as a heretic, but who nevertheless was not ashamed to profess himself a Christian.

I end with an extract from one of the most distinguished of living naturalists: — “The antiquarian recognizes at once the workings of intelligence in the remains of an ancient civilization. He may fail to ascertain their age correctly, he may remain doubtful as to the order in which they were successively constructed, but the character of the whole tells him they are works of art, and that men like himself originated these relics of by-gone ages. So shall the intelligent naturalist read at once in the pictures which nature presents to him, the works of a higher Intelligence; he shall recognize in the minute perforated cells of the coniferæ, which differ so wonderfully from those of other plants, the hieroglyphics of a peculiar age; in their needle-like leaves, the escutcheon of a peculiar dynasty; in their repeated appearance under most diversified circumstances, a thoughtful and thought-eliciting adaptation. He beholds, indeed, the works of a being *thinking* like himself, but he feels, at the same time, that he stands as much below the Supreme Intelligence, in wisdom, power, and goodness, as the works of art are inferior to the wonders of nature. Let naturalists look at the world under such impressions, and evidence will pour in upon us that all creatures are expressions of the thoughts of Him whom we know, love, and adore unseen.”

¹ Rom. i. 20.

classification hardly suggested itself. The mind must be bewildered by the multiplicity of facts before it has recourse to division. As long as the only languages studied were Greek, Latin, and Hebrew, the simple division into sacred and profane, or classical and oriental, sufficed. But when theologians extended their studies to Arabic, Chaldee, and Syriac, a step, and a very important step, was made towards the establishment of a class or family of languages.¹ No one could help seeing that these lan-

¹ Herras (Catalogo, i. 37) mentions the following works, published during the sixteenth century, bearing on the science of language:—"Introductio in Chaldaicam Linguam, Sircam, atque Armenicam, et decem alias Linguas," a Thesio Ambrosio. Papie, 1539, 4to. "De Ratione communium Linguarum et Litterarum Commentarius," a Theodoro Bibliandro. Tiguri, 1548, 4to. It contains the Lord's Prayer in fourteen languages. Bibliander derives Welsh and Cornish from Greek, Greek having been carried there from Marseilles, through France. He states that Armenian differs little from Chaldee, and cites Postel, who derived the Turks from the Armenians, because Turkish was spoken in Armenia. He treats the Persians as descendants of Shem, and connects their language with Syriac and Hebrew. Servian and Georgian are, according to him, dialects of Greek.

Other works on language published during the sixteenth century are:—"Perion, Dialogorum de Linguae Gallicae origine ejusque cum Graeca cognatione, libri quatuor." Parisiis, 1554. He says that as French is not mentioned among the seventy-two languages which sprang from the Tower of Babel, it must be derived from Greek. He quotes Caesar (*de Bello Gallico*, vi. 14) to prove that the Druids spoke Greek, and then derives from it the modern French language!

The works of Henri Estienne (1528-1598) stand on a much sounder basis. He has been unjustly accused of having derived French from Greek. See his "*Traicté de la Conformité du Langage français avec le grec*;" about 1566. It contains chiefly syntactical and grammatical remarks, and its object is to show that modes of expression in Greek, which sound anomalous and difficult, can be rendered easy by a comparison of analogous expressions in French.

The Lord's Prayer was published in 1548 in fourteen languages, by Bibliander; in 1591 in twenty-six languages, by Roccha ("*Bibliotheca Apostolica Vaticana*," a fratre Angelo Roccha: Romae, 1591, 4to.); in 1592 in forty languages, by Megiserus ("*Specimen XL. Linguarum et Dialectorum ab Hieronymo Megisero à diversis auctoribus collectarum quibus Oratio Dominica est expressa*;" Francofurti, 1592); in 1593, in fifty languages, by the same author ("*Oratio Dominica L. diversis lingua*," cura H. Megiseri: Francofurti, 1593, 8vo.).

guages were most intimately related to each other, and that they differed from Greek and Latin on all points on which they agreed among themselves. As early as 1606 we find *Guichard*,¹ in his "*Harmonie Etymologique*," placing Hebrew, Chaldee, and Syriac as a class of languages by themselves, and distinguishing besides between the Romance and Teutonic dialects.

What prevented, however, for a long time the progress of the science of language was the idea that Hebrew was the primitive language of mankind, and that, therefore, all languages must be derived from Hebrew. The fathers of the Church never expressed any doubt on this point. St. Jerome, in one of his epistles to Damasus,² writes: "the whole of antiquity (*universa antiquitas*) affirms that Hebrew, in which the Old Testament is written, was the beginning of all human speech." Origen, in his eleventh Homily on the book of Numbers, expresses his belief that the Hebrew language, origin-

¹ At the beginning of the seventeenth century was published "*Trésor de l'Histoire des Langues de cet Univers*," par Claude Duret; seconde edition: Iverdon, 1619, 4to. Hervas says that Duret repeats the mistakes of Postal, Bibliander, and other writers of the sixteenth century.

Before Duret came Estienne Guichard, "*l'Harmonie Etymologique des Langues Hebraïque, Chaldaïque, Syriaque — Greque — Latine, Française, Italienne, Espagnole — Allemande, Flamende, Anglaise, &c.*:" Paris, 1606.

Hervas only knows the second edition, Paris, 1618, and thinks the first was published in 1608. The title of his book shows that Guichard distinguished between four classes of languages, which we should now call the Semitic, the Hellenic, Italic, and Teutonic: he derives, however, Greek from Hebrew.

I. I. Scaliger, in his "*Diatriba de Europæorum Linguis*" (*Opuscula varia: Parisiis*, 1610), p. 119, distinguishes eleven classes: Latin, Greek, Teutonic, Slavonic, Epirotic or Albanian, Tartaric, Hungarian, Finnic, Irish, British in Wales and Brittany, and Bask or Cantabrian.

² "*Initium oris et communis eloquii, et hoc omne quod loquimur, Hebræam esse linguam qua vetus Testamentum scriptum est, universa antiquitas tradidit.*" In another place (Isaia, c. 7) he writes, "*Omnium enim fere linguarum verbis utuntur Hebræi.*"

ally given through Adam, remained in that part of the world which was the chosen portion of God, not left like the rest to one of His angels.¹ When, therefore, the first attempts at a classification of languages were made, the problem, as it presented itself to scholars such as Guichard and Thomassin, was this: "As Hebrew is undoubtedly the mother of all languages, how are we to explain the process by which Hebrew became split into so many dialects, and how can these numerous dialects, such as Greek, and Latin, Coptic, Persian, Turkish, be traced back to their common source, the Hebrew?"

It is astonishing what an amount of real learning and ingenuity was wasted on this question during the seventeenth and eighteenth centuries. It finds, perhaps, but one parallel in the laborious calculations and constructions of early astronomers, who had to account for the movements of the heavenly bodies, always taking it for granted that the earth must be the fixed centre of our planetary system. But, although we know now that the labors of such scholars as Thomassin were, and could not be otherwise than fruitless, it would be a most discouraging view to take of the progress of the human race, were we to look upon the exertions of eminent men in former ages, though they may have been in a wrong direction, as mere vanity and vexation of spirit. We must not forget that the very fact of the failure of such men contributed powerfully to a general conviction that there must be something wrong in the problem itself, till at last a bolder genius inverted the problem and thereby solved it. When books after books had been

¹ "Mansit lingua per Adam primitus data, ut putamus, Hebræa, in ea parte hominum, quæ non pars alicujus angeli, sed quæ Dei portio permansit."

written to show how Greek and Latin and all other languages were derived from Hebrew,¹ and when not one single system proved satisfactory, people asked at last — “Why then *should* all languages be derived from Hebrew?” — and this very question solved the problem. It might have been natural for theologians in the fourth and fifth centuries, many of whom knew neither Hebrew nor any language except their own, to take it for granted that Hebrew was the source of all languages, but there is neither in the Old nor the New Testament a single word to necessitate this view. Of the language of Adam we know nothing; but if Hebrew, as we know it, was one of the languages that sprang from the confusion of tongues at Babel, it could not well have been the language of Adam or of the whole earth, “when the whole earth was still of one speech.”²

Although, therefore, a certain advance was made towards a classification of languages by the Semitic scholars of the seventeenth century, yet this partial advance became in other respects an impediment. The purely scientific interest in arranging languages according to their characteristic features was lost sight of, and erroneous ideas were propagated, the influence of which has even now not quite subsided.

The first who really conquered the prejudice that

¹ Guichard went so far as to maintain that as Hebrew was written from right to left, and Greek from left to right, Greek words might be traced back to Hebrew by being simply read from right to left.

² Among the different systems of Rabbinical exegesis, there is one according to which every letter in Hebrew is reduced to its numerical value, and the word is explained by another of the same quantity; thus, from the passage, “And all the inhabitants of the earth were of one language.” (Gen. xi. 1), is deduced that they all spoke Hebrew, עֶזְרָא being changed for its synonym עֶזְרָא, and עֶזְרָא, (5+100+4+300=409) is substituted for its equivalent עֶזְרָא, (1+8+400=409). *Cokeleth*, ed. Ginsburg, p. 31.

Hebrew was the source of all language was Leibniz, the cotemporary and rival of Newton. "There is as much reason," he said, "for supposing Hebrew to have been the primitive language of mankind, as there is for adopting the view of Goropius, who published a work at Antwerp, in 1580, to prove that Dutch was the language spoken in Paradise."¹ In a letter to Tenzel, Leibniz writes: "To call Hebrew the primitive language, is like calling branches of a tree primitive branches, or like imagining that in some country hewn trunks could grow instead of trees. Such ideas may be conceived, but they do not agree with the laws of nature, and with the harmony of the universe, that is to say with the Divine Wisdom."²

But Leibniz did more than remove this one great stumbling-block from the threshold of the science of language. He was the first to apply the principle of sound inductive reasoning to a subject which before him had only been treated at random. He pointed

¹ *Hermathena Joannis Goropii Becani: Antuerpiæ, 1580. Origines Antverpianæ, 1569.* André Kempe, in his work on the language of Paradise, maintains that God spoke to Adam in Swedish, Adam answered in Danish, and the serpent spoke to Eve in French.

Chardin relates that the Persians believe three language to have been spoken in Paradise; Arabic by the serpent, Persian by Adam and Eve, and Turkish by Gabriel.

J. B. Erro, in his "*El mundo primitivo*," Madrid, 1814, claims Bask as the language spoken by Adam.

A curious discussion took place about two hundred years ago in the Metropolitan Chapter of Pampeluna. The decision, as entered in the minutes of the chapter, is as follows:—1. Was Bask the primitive language of mankind? The learned members confess that, in spite of their strong conviction on the subject, they dare not give an affirmative answer. 2. Was Bask the only language spoken by Adam and Eve in Paradise? On this point the chapter declares that no doubt can exist in their minds, and that "it is impossible to bring forward any serious or rational objection." See Hennequin, "*Essai sur l'Analogie des Langues*," Bordeaux, 1838, p. 60.

² Guhrauer's *Life of Leibniz*, ii. p. 129.

out the necessity of collecting, first of all, as large a number of facts as possible.¹ He appealed to missionaries, travellers, ambassadors, princes, and emperors, to help him in a work which he had so much at heart. The Jesuits in China had to work for him. Witsen,² the traveller, sent him a most precious present, a translation of the Lord's Prayer into the jargon of the Hot-tentots. "My friend," writes Leibniz in thanking him, "remember, I implore you, and remind your Muscovite friends, to make researches in order to procure specimens of the Scythian languages, the Samoyedes, Siberians, Bashkirs, Kalmuks, Tungusians, and others." Having made the acquaintance of Peter the Great, Leibniz wrote to him the following letter, dated Vienna, October the 26th, 1713: —

"I have suggested that the numerous languages, hitherto almost entirely unknown and unstudied, which are current in the empire of your Majesty and on its frontiers, should be reduced to writing; also that dictionaries, or at least small vocabularies, should be collected, and translations be procured in such languages of the Ten Commandments, the Lord's Prayer, the Apostolic Symbolum, and other parts of the Catechism,

¹ Guhrauer, vol. ii. p. 127. In his "Dissertation on the Origin of Nations," 1710, Leibniz says: — "The study of languages must not be conducted according to any other principles but those of the exact sciences. Why begin with the unknown instead of the known? It stands to reason that we ought to begin with studying the modern languages which are within our reach, in order to compare them with one another, to discover their differences and affinities, and then to proceed to those which have preceded them in former ages, in order to show their filiation and their origin, and then to ascend step by step to the most ancient tongues, the analysis of which must lead us to the only trustworthy conclusions."

² Nicolaes Witsen, Burgomaster of Amsterdam, travelled in Russia, 1666-1677; published his travels in 1672, dedicated to Peter the Great. Second edition, 1705. It contains many collections of words.

ut omnis lingua laudet Dominum. This would increase the glory of your Majesty, who reigns over so many nations, and is so anxious to improve them; and it would, likewise, by means of a comparison of languages, enable us to discover the origin of those nations who from Scythia, which is subject to your Majesty, advanced into other countries. But principally it would help to plant Christianity among the nations speaking those dialects, and I have, therefore, addressed the Most Rev. Metropolitan on the same subject."¹

Leibniz drew up a list of the most simple and necessary terms which should be selected for comparison in various languages. At home, while engaged in historical researches, he collected whatever could throw light on the origin of the German language, and he encouraged others, such as Eccard, to do the same. He pointed out the importance of dialects, and even of provincial and local terms, for elucidating the etymological structure of languages.² Leibniz never undertook a systematic classification of the whole realm of language, nor was he successful in classing the dialects with which he had become acquainted. He distinguished between a Japhetic and Aramaic class, the former occupying the north, the latter the south, of the continent of Asia and Europe. He believed in a common origin of languages, and in a migration of the human race from east to west. But he failed to distinguish

¹ Catherinens der Grossen Verdienste um die Vergleichende Sprachkunde, von F. Adelung. Petersburg, 1815. Another letter of his to the Vice-Chancellor, Baron Schaffiroff, is dated Pirmont, June 22, 1716.

² Collectanea Etymologica, ii. 255. "Malim sine discrimine Dialectorum corrogari Germanicas voces. Puto quasdam origines ex superioribus Dialectis melius apparituras; ut ex Ulfilæ Pontogothicis, Otfridi Franciscis."

the exact degrees of relationship in which languages stood to each other, and he mixed up some of the Turanian dialects, such as Finnish and Tataric, with the Japhetic family of speech. If Leibniz had found time to work out all the plans which his fertile and comprehensive genius conceived, or if he had been understood and supported by cotemporary scholars, the science of language, as one of the inductive sciences, might have been established a century earlier. But a man like Leibniz, who was equally distinguished as a scholar, a theologian, a lawyer, an historian, and a mathematician, could only throw out hints as to how language ought to be studied. Leibniz was not only the discoverer of the differential calculus. He was one of the first to watch the geological stratification of the earth. He was engaged in constructing a calculating machine, the idea of which he first conceived as a boy. He drew up an elaborate plan of an expedition to Egypt, which he submitted to Louis XIV. in order to avert his attention from the frontiers of Germany. The same man was engaged in a long correspondence with Bossuet to bring about a reconciliation between Protestants and Romanists, and he endeavored, in his *Theodicée* and other works, to defend the cause of truth and religion against the inroads of the materialistic philosophy of England and France. It has been said, indeed, that the discoveries of Leibniz produced but little effect, and that most of them had to be made again. This is not the case, however, with regard to the science of language. The new interest in languages, which Leibniz had called into life, did not die again. After it had once been recognized as a desideratum to bring together a complete *Herbarium*

of the languages of mankind, missionaries and travelers felt it their duty to collect lists of words, and draw up grammars wherever they came in contact with a new race. The two great works in which, at the beginning of our century, the results of these researches were summed up, I mean the Catalogue of Languages by Hervas, and the Mithridates of Adelung, can both be traced back directly to the influence of Leibniz. As to Hervas, he had read Leibniz carefully, and though he differs from him on some points, he fully acknowledges his merits in promoting a truly philosophical study of languages. Of Adelung's Mithridates and his obligations to Leibniz we shall have to speak presently.

Hervas lived from 1735 to 1809. He was a Spaniard by birth, and a Jesuit by profession. While working as a missionary among the Polyglottous tribes of America, his attention was drawn to a systematic study of languages. After his return, he lived chiefly at Rome in the midst of the numerous Jesuit missionaries who had been recalled from all parts of the world, and who, by their communications on the dialects of the tribes among whom they had been laboring, assisted him greatly in his researches.

Most of his works were written in Italian, and were afterwards translated into Spanish. We cannot enter into the general scope of his literary labors, which are of the most comprehensive character. They were intended to form a kind of Kosmos, for which he chose the title of "*Idea del Universo*." What is of interest to us is that portion which treats of man and language as part of the universe; and here, again, chiefly his Catalogue of Languages, in six volumes, published in Spanish in the year 1800.

If we compare the work of Hervas with a similar work which excited much attention towards the end of the last century, and is even now more widely known than Hervas, I mean Court de Gebelin's "*Monde Primitif*,"¹ we shall see at once how far superior the Spanish Jesuit is to the French philosopher. Gebelin treats Persian, Armenian, Malay, and Coptic as dialects of Hebrew; he speaks of Bask as a dialect of Celtic, and he tries to discover Hebrew, Greek, English, and French words in the idioms of America. Hervas, on the contrary, though embracing in his catalogue five times the number of languages that were known to Gebelin, is most careful not to allow himself to be carried away by theories not warranted by the evidence before him. It is easy now to point out mistakes and inaccuracies in Hervas, but I think that those who have blamed him most are those who ought most to have acknowledged their obligations to him. To have collected specimens and notices of more than 300 languages is no small matter. But Hervas did more. He himself composed grammars of more than forty languages.² He was the first to point out that the true affinities of languages must be determined chiefly by grammatical evidence, not by mere similarity of words.³ He proved, by a compara-

¹ *Monde primitif analysé et comparé avec le monde moderne*: Paris, 1773.

² *Catalogo*, i. 63.

³ "Mas se deben consultar gramaticas para conocer su caracter proprio por medio de su artificio gramatical." — *Catalogo*, i. 65. The same principle was expressed by Lord Monboddo, about 1795, in his *Ancient Metaphysics*, vol. iv. p. 326. "My last observation is, that, as the art of a language is less arbitrary and more determined by rule than either the sound or sense of words, it is one of the principal things by which the connection of languages with one another is to be discovered. And, therefore, when we find that two languages practise these great arts of language, —

tive list of declensions and conjugations, that Hebrew, Chaldee, Syriac, Arabic, Ethiopic, and Amharic are all but dialects of one original language, and constitute one family of speech, the Semitic.¹ He scouted the idea of deriving all the languages of mankind from Hebrew. He had perceived clear traces of affinity in Hungarian, Lapponian, and Finnish, three dialects now classed as members of the Turanian family.² He had proved that Bask was not, as was commonly supposed, a Celtic dialect, but an independent language, spoken by the earliest inhabitants of Spain, as proved by the names of the Spanish mountains and rivers.³ Nay, one of the most brilliant discoveries in the history of the science of language, the establishment of the Malay and Polynesian family of speech, extending from the island of Madagascar east of Africa, over 208 degrees of longitude, to the Easter Islands west of America,⁴ was made by Hervas long before it was announced to the world by Humboldt.

derivation, composition, and flexion, — in the same way, we may conclude, I think, with great certainty, that the one language is the original of the other, or that they are both dialects of the same language."

¹ Catalogo, ii. 468.

² Ibid. i. 49. Witsen, too, in a letter to Leibniz, dated Mai 22, 1698, alludes to the affinity between the Tataric and Mongolic languages. "On m'a dit que ces deux langues (la langue Moegale et Tartare) sont différentes à peu près comme l'Allemand l'est du Flamand, et qu'il est de même des Kalmucs et Moegals." — *Collectanea Etymologica*, ii. p. 363.

³ Leibniz held the same opinion (see Hervas, Catalogo, i. 50), though he considered the Celts in Spain as descendants of the Iberians.

⁴ Catalogo, i. 30. "Verá que la lengua llamada *malaya*, la qual se habla en la península de Malaca, es matriz de innumerables dialectos de naciones isleñas, que desde dicha península se extienden por mas de doscientos grados de longitud en los mares oriental y pacífico."

Ibid. ii. 10. "De esta península de Malaca han salido enjambres de pobladores de las islas del mar Indiano y Pacífico, en las que, aunque parece haber otra nacion, que es de negros, la *malaya* es generalmente la mas dominante y extendida. La lengua malaya se habla en dicha península, continente del Asia, en las islas Maldivas, en la de Madagascar (perteneiente

Hervas was likewise aware of the great grammatical similarity between Sanskrit and Greek, but the imperfect information which he received from his friend, the Carmelite missionary, Fra Paolino de San Bartolomeo, the author of the first Sanskrit grammar, published at Rome in 1790, prevented him from seeing the full meaning of this grammatical similarity. How near Hervas was to the discovery of the truth may be seen from his comparing such words as *theos*, God, in Greek, with *Deva*, God, in Sanskrit. He identified the Greek auxiliary verb *eimi*, *eis*, *esti*, I am, thou art, he is, with the Sanskrit *asmi*, *asi*, *asti*. He even pointed out that the terminations of the three genders¹ in Greek, *os*, *ē*, *on*, are the same as the Sanskrit, *as*, *ā*, *am*. But believing, as he did, that the Greeks derived their philosophy and mythology from India,² he supposed that they had likewise borrowed from the Hindus some of their words, and even the art of distinguishing the gender of words.

The second work which represents the science of language at the beginning of this century, and which is, to a still greater extent, the result of the impulse which Leibniz had given, is the Mithridates of Adelung.³ Adelung's work depends partly on Hervas,

al Africa), en las de Sonda, en las Molucas, en las Filipinas, en las del archipiélago de San Lázaro, y en muchísimas del mar del Sur desde dicho archipiélago hasta islas, que por su poca distancia de América se creían pobladas por americanos. La isla de Madagascar se pone á 60 grados de longitud, y á los 268 se pone la isla de Pasqua ó de Davis, en la que se habla otro dialecto malayo; por lo que la extension de los dialectos malayos es de 208 grados de longitud."

¹ Catalogo, ii. 134.

² Ibid. ii. 135.

³ The first volume appeared in 1806. He died before the second volume was published, which was brought out by Vater in 1809. The third and fourth volumes followed in 1816 and 1817, edited by Vater and the younger Adelung.

partly on the collections of words which had been made under the auspices of the Russian government. Now these collections are clearly due to Leibniz. Although Peter the Great had no time or taste for philological studies, the government kept the idea of collecting all the languages of the Russian empire steadily in view.¹ Still greater luck was in store for the science of language. Having been patronized by Cæsar at Rome, it found a still more devoted patroness in the great Cæsarina of the North, Catherine the Great (1762–1796). Even as Grand-duchess Catherine was engrossed with the idea of a Universal Dictionary, on the plan suggested by Leibniz. She encouraged the chaplain of the British Factory at St. Petersburg, the Rev. Daniel Dumaresq, to undertake the work, and he is said to have published, at her desire, a “Comparative Vocabulary of Eastern Languages,” in quarto; a work, however, which, if ever published, is now completely lost. The reputed author died in London in 1805, at the advanced age of eighty-four. When Catherine came to the throne, her plans of conquest hardly absorbed more of her time than her philological studies; and she once shut herself up nearly a year, devoting all her time to the compilation of her Comparative Dictionary. A letter of hers to Zimmermann, dated the 9th of May, 1785, may interest some of my hearers:—

“Your letter,” she writes, “has drawn me from the solitude in which I had shut myself up for nearly nine months, and from which I found it hard to stir. You

¹ Evidence of this is to be found in Strahlenberg’s work on the “North and East of Europe and Asia,” 1730; with *tabula polyglotta*, &c.; in Messerschmidt’s “Travels in Siberia,” from 1729–1739; in Bachmeister, “*Idea et desideria de colligendis linguarum speciminibus*,” Petropoli, 1773; in Gûldenstädt’s “Travels in the Caucasus,” &c.

will not guess what I have been about. I will tell you, for such things do not happen every day. I have been making a list of from two to three hundred radical words of the Russian language, and I have had them translated into as many languages and jargons as I could find. Their number exceeds already the second hundred. Every day I took one of these words and wrote it out in all the languages which I could collect. This has taught me that the Celtic is like the Ostiakian: that what means sky in one language means cloud, fog, vault, in others; that the word God in certain dialects means Good, the Highest, in others, sun or fire. (Up to here her letter is written in French; then follows a line of German.) I became tired of my hobby, after I had read your book on Solitude. (Then again in French.) But as I should have been sorry to throw such a mass of paper in the fire;—besides, the room, six fathoms in length, which I use as a boudoir in my hermitage, was pretty well warmed—I asked Professor Pallas to come to me, and after making an honest confession of my sin, we agreed to publish these collections, and thus make them useful to those who like to occupy themselves with the forsaken toys of others. We are only waiting for some more dialects of Eastern Siberia. Whether the world at large will or will not see in this work bright ideas of different kinds, must depend on the disposition of their minds, and does not concern me in the least.”

If an empress rides a hobby, there are many ready to help her. Not only were all Russian ambassadors instructed to collect materials; not only did German professors¹ supply grammars and dictionaries, but

¹ The empress wrote to Nicolai at Berlin to ask him to draw up a cata-

Washington himself, in order to please the empress, sent her list of words to all governors and generals of the United States, enjoining them to supply the equivalents from the American dialects. The first volume of the Imperial Dictionary¹ appeared in 1787, containing a list of 285 words translated into fifty-one European, and 149 Asiatic languages. Though full credit should be given to the empress for this remarkable undertaking, it is but fair to remember that it was the philosopher who, nearly a hundred years before, sowed the seed that fell into good ground.

As collections, the works of Hervas, of the Empress Catherine, and of Adelung, are highly important, though, such is the progress made in the classification of languages during the last fifty years, that few people would now consult them. Besides, the principle of classification which is followed in these works can hardly claim to be called scientific. Languages are arranged geographically, as the languages of Europe, Asia, Africa, America, and Polynesia, though, at the same time, natural affinities are admitted which would unite dialects spoken at a distance of 208 degrees. Languages seemed to float about like islands on the ocean of human speech; they did not shoot together to form themselves into larger continents. This is a most critical period in the history of every science, and if it

logue of grammars and dictionaries. The work was sent to her in manuscript from Berlin, in 1785.

¹ "Glossarium comparativum Linguarum totius Orbis:" Petersburg, 1787. A second edition, in which the words are arranged alphabetically, appeared in 1790-91, in 4 vols., edited by Jankiewitsch de Miriewo. It contains 279 (272) languages, i. e. 171 for Asia, 55 for Europe, 30 for Africa, and 23 for America. According to Pott, "Ungleichheit," p. 230, it contains 277 languages, 185 for Asia, 22 for Europe, 28 for Africa, 15 for America. This would make 280. It is a very scarce book.

had not been for a happy accident, which, like an electric spark, caused the floating elements to crystallize into regular forms, it is more than doubtful whether the long list of languages and dialects, enumerated and described in the works of Hervas and Adelung, could long have sustained the interest of the student of languages. This electric spark was the discovery of Sanskrit. Sanskrit is the ancient language of the Hindus. It had ceased to be a spoken language at least 300 B. C. At that time the people of India spoke dialects standing to the ancient Vedic Sanskrit in the relation of Italian to Latin. We know some of these dialects, for there were more than one in various parts of India, from the inscriptions which the famous King Ásoka had engraved on the rocks of Dhauli, Girnar, and Kapurdigiri, and which have been deciphered by Prinsep, Norris, Wilson, and Burnouf. We can watch the further growth of these local dialects in the so-called *Páli*, the sacred language of Buddhism in Ceylon, and once the popular dialect of the country where Buddhism took its origin, the modern Behár, the ancient Magadha.¹ We meet the same local dialects again in what are called the Prâkrit idioms, used in the later plays, in the sacred literature of the Jainas, and in a few poetical compositions; and we see at last how, through a mixture with the languages of the various conquerors of India, the Arabic, Persian, Mongolic, and Turkish, and through a concomitant corruption of their grammatical system, they were changed into the modern Hindí, Hindustání, Maharrattí, and Bengálí. During all this time, however, Sanskrit continued as the literary language of the

¹ The Singhalese call Pali, Mungata; the Burmese, Magadabáa.

Brahmans. Like Latin, it did not die in giving birth to its numerous offspring ; and even at the present day, an educated Brahman would write with greater fluency in Sanskrit than in Bengálí. Sanskrit was what Greek was at Alexandria, what Latin was during the Middle Ages. It was the classical and at the same time the sacred language of the Brahmans, and in it were written their sacred hymns, the Vedas, and the later works, such as the laws of Manu and the Purâṇas.

The existence of such a language as the ancient idiom of the country, and the vehicle of a large literature, was known at all times ; and if there are still any doubts, like those expressed by Dugald Stewart in his "Conjectures concerning the Origin of the Sanskrit,"¹ as to its age and authenticity, they will be best removed by a glance at the history of India, and at the accounts given by the writers of different nations that became successively acquainted with the language and literature of that country.

The argument that nearly all the names of persons and places in India mentioned by Greek and Roman writers are pure Sanskrit, has been handled so fully and ably by others, that nothing more remains to be said.

The next nation after the Greeks that became acquainted with the language and literature of India was the Chinese. Though Buddhism was not recognized as a third state-religion before the year 65 A. D., under the Emperor Ming-ti,² Buddhist missionaries reached China from India as early as the third century B. c. One Buddhist missionary is mentioned in the Chinese

¹ Works, vol. iii. p. 72.

² M. M.'s Buddhism and Buddhist Pilgrims, p. 23.

annals in the year 217 ; and about the year 120 B. C., a Chinese general, after defeating the barbarous tribes north of the desert of Gobi, brought back as a trophy a golden statue, the statue of Buddha. The very name of Buddha, changed in Chinese into Fo-t'o and Fo,¹ is pure Sanskrit, and so is every word and every thought of that religion. The language which the Chinese pilgrims went to India to study, as the key to the sacred literature of Buddhism, was Sanskrit. They call it Fan ; but Fan, as M. Stanislas Julien has shown, is an abbreviation of Fan-lan-mo, and this is the only way in which the Sanskrit Brahman could be rendered in Chinese.² We read of the Emperor Ming-ti, of the dynasty of Han, sending Tsai-in and other high officials to India, in order to study there the doctrine of Buddha. They engaged the services of two learned Buddhists, Matāṅga and Tchou-fa-lan, and some of the most important Buddhist works were translated by them into Chinese. The intellectual intercourse between the Indian peninsula and the northern continent of Asia continued uninterrupted for several centuries. Missions were sent from China to India to report on the religious, political, social, and geographical state of the country ; and the chief object of interest, which attracted public embassies and private pilgrims across the Himalayan mountains, was the religion of Buddha. About 300 years after the public recognition of Buddhism by the Emperor Ming-ti, the great stream of

¹ Méthode pour déchiffrer et transcrire les noms Sanscrits qui se rencontrent dans les livres chinois, inventée et démontrée par M. Stanislas Julien : Paris, 1861, p. 103.

² "Fan-chou (brahmākshara), les caractères de l'écriture indienne, inventée par Fan, c'est-à-dire Fan-lan-mo (brahmā)." — *Stanislas Julien, Voyages des Pèlerins Bouddhistes*, vol. II. p. 505.

Buddhist pilgrims began to flow from China to India. The first account which we possess of these pilgrimages refers to the travels of Fa-hian, who visited India towards the end of the fourth century. His travels were translated into French by A. Remusat. After Fa-hian, we have the travels of Hoei-seng and Songyun, who were sent to India, in 518, by command of the empress, with the view of collecting sacred books and relics. Then followed Hiouen-thsang, whose life and travels, from 629-645, have been rendered so popular by the excellent translation of M. Stanislas Julien. After Hiouen-thsang the principal works of Chinese pilgrims are the *Itineraries of the Fifty-six Monks*, published in 730, and the travels of Khi-nie, who visited India in 964, at the head of 300 pilgrims.

That the language employed for literary purposes in India during all this time was Sanskrit, we learn, not only from the numerous names and religious and philosophical terms mentioned in the travels of the Chinese pilgrims, but from a short paradigm of declension and conjugation in Sanskrit which one of them (Hiouen-thsang) has inserted in his diary.

As soon as the Muhammedans entered India, we hear of translations of Sanskrit works into Persian and Arabic.¹ Harun-al-Rashid (786-809) had two Indians, Manka and Saleh, at his court as physicians. Manka translated the classical work on medicine, *Susruta*, and a treatise on poisons, ascribed to Châṇakya, from Sanskrit into Persian.² During the Chalifate of Al Mámúm, a famous treatise on Algebra was translated by Muhammed ben Musa from Sanskrit into Arabic (edited by F. Rosen).

¹ Sir Henry Elliot's *Historians of India*, p. 259.

² See Professor Flügel, in *Zeitschrift der D. M. G.*, xi., s. 149 and 325.

About 1000 A. D., Abu Rihan al Birúni (born 970, died 1038) spent forty years in India, and composed his excellent work, the *Tarikhul-Hind*, which gives a complete account of the literature and sciences of the Hindus at that time. Al Birúni had been appointed by the Sultan of Khawarazm to accompany an embassy which he sent to Mahmud of Ghazni and Masud of Lahore. The learned Avicenna had been invited to join the same embassy, but had declined. Al Birúni must have acquired a complete knowledge of Sanskrit, for he not only translated one work on the *Sânkhya*, and another on the *Yoga* philosophy, from Sanskrit into Arabic, but likewise two works from Arabic into Sanskrit.¹

About 1150 we hear of Abu Saleh translating a work on the education of kings from Sanskrit into Arabic.²

Two hundred years later, we are told that Firoz Shah, after the capture of Nagarcote, ordered several Sanskrit works on philosophy to be translated from Sanskrit by Maulana Izzu-d-din Khalid Khani. A work on veterinary medicine ascribed to Sâlotar,³ said

¹ Elliot's *Historians of India*, p. 96. Al Birúni knew the *Harivansha*, and fixes the date of the five *Siddhântas*. The great value of Al Birúni's work was first pointed out by M. Reinaud, in his excellent "*Mémoire sur l'Inde*," Paris, 1849.

² In the Persian work *Mujmalu-t-Tawârikh*, there are chapters translated from the Arabic of Abu Saleh ben Shib ben Jawa, who had himself abridged them, a hundred years before, from a Sanskrit work, called "*Instruction of Kings*" (*Râjanîti*?). The Persian translator lived about 1150. See Elliot, l. c.

³ Sâlotar is not known as the author of such a work. *Śâlôtariya* occurs instead of *Śâlâturiya*, in *Rāja Râdhakant*; but *Śâlâturiya* is a name of Pāṇini, and the teacher of Sûruta is said to have been Divodâsa. An Arabic translation of a Sanskrit work on veterinary medicine by Châṇakya is mentioned by Hâjî Chalfâ, v. p. 59. A translation of the *Charaka* from Sanskrit into Persian, and from Persian into Arabic, is mentioned in the *Fihrist*, finished 987 A. D.

to have been the tutor of Suśruta, was likewise translated from Sanskrit in the year 1381. A copy of it was preserved in the Royal Library of Lucknow.

Two hundred years more bring us to the reign of Akbar (1556–1605). A more extraordinary man never sat on the throne of India. Brought up as a Muhammedan, he discarded the religion of the Prophet as superstitious,¹ and then devoted himself to a search after the true religion. He called Brahmans and fire-worshippers to his court, and ordered them to discuss in his presence the merits of their religions with the Muhammedan doctors. When he heard of the Jesuits at Goa, he invited them to his capital, and he was for many years looked upon as a secret convert to Christianity. He was, however, a rationalist and deist, and never believed anything, as he declared himself, that he could not understand. The religion which he founded, the so-called Ilahi religion, was pure Deism mixed up with the worship of the sun² as the purest and highest emblem of the Deity. Though Akbar himself could neither read nor write,³ his court was the home of literary men of all persuasions. Whatever book, in any language, promised to throw light on the problems nearest to the emperor's heart, he ordered to be translated into Persian. The New Testament⁴ was thus translated at his command; so were the Mahābhārata, the Rāmāyaṇa, the Amarakośa,⁵ and other classical

¹ See Vans Kennedy, "Notice respecting the Religion introduced by Akbar:" Transactions of the Literary Society of Bombay: London, 1820, vol. ii. pp. 242–270.

² Elliot, *Historians of India*, p. 249.

³ Müllbauer, *Geschichte der Katholischen Missionen Ostindiens*, p. 134.

⁴ Elliot, *Historians of India*, p. 248.

⁵ *Ibid.* pp. 259, 260. The *Tarikh-i-Badauni*, or *Muntakhabu-t-Tawārikh*, written by Mulla Abdu-l-Kādir Maluk, Shah of Badāun, and finished in

works of Sanskrit literature. But though the emperor set the greatest value on the sacred writings of different nations, he does not seem to have succeeded in extorting from the Brahmans a translation of the Veda. A translation of the Atharva-veda¹ was made for him by Haji Ibrahim Sirhindi; but that Veda never enjoyed the same authority as the other three Vedas; and it is doubtful even whether by Atharva-veda is meant more than the Upanishads, some of which may have been composed for the special benefit of Akbar. There is a story which, though evidently of a legendary character, shows how the study of Sanskrit was kept up by the Brahmans during the reign of the Mogul emperors.

“Neither the authority (it is said) nor promises of Akbar could prevail upon the Brahmans to disclose the tenets of their religion: he was therefore obliged to have recourse to artifice. The stratagem he made use of was to cause an infant, of the name of *Feizi*, to be committed to the care of these priests, as a poor orphan of the sacerdotal line, who alone could be initiated into the sacred rites of their theology. Feizi, having received the proper instructions for the part he was to act, was conveyed privately to Benares, the seat of knowledge in Hindostan; he was received into the

1595, is a general history of India from the time of the Ghaznevites to the 40th year of Akbar. The author is a bigoted Muhammedan and judges Akbar severely, though he was himself under great obligations to him. He was employed by Akbar to translate from Arabic and Sanskrit into Persian: he translated the Rāmāyana, two out of the eighteen sections of the Mahābhārata, and abridged a history of Cashmir. These translations were made under the superintendence of Faizi, the brother of the minister Abu-l-Fazl. “Abulfacel, ministro de Akbar, sevalió del Amarasinha y del Mahabhārata, que traduxo en persiano el año de 1586.” — *Hervás*, ii. 136.

¹ See M. M.'s History of Ancient Sanskrit Literature, p. 327.

house of a learned Brahman, who educated him with the same care as if he had been his son. After the youth had spent ten years in study, Akbar was desirous of recalling him ; but he was struck with the charms of the daughter of his preceptor. The old Brahman laid no restraint on the growing passion of the two lovers. He was fond of Feizi, and offered him his daughter in marriage. The young man, divided between love and gratitude, resolved to conceal the fraud no longer, and, falling at the feet of the Brahman, discovered the imposture, and asked pardon for his offences. The priest, without reproaching him, seized a poniard which hung at his girdle, and was going to plunge it in his heart, if Feizi had not prevented him by taking hold of his arm. The young man used every means to pacify him, and declared himself ready to do anything to expiate his treachery. The Brahman, bursting into tears, promised to pardon him on condition that he should swear never to translate the *Vedas*, or sacred volumes, or disclose to any person whatever the symbol of the Brahman creed. Feizi readily promised him : how far he kept his word is not known ; but the sacred books of the Indians have never been translated.”¹

We have thus traced the existence of Sanskrit, as the language of literature and religion of India, from the time of Alexander to the reign of Akbar. A hundred years after Akbar, the eldest son of Shah Jehan, the unfortunate Dārā, manifested the same interest in religious speculations which had distinguished his great

¹ History of the Settlements of the Europeans in the East and West Indies, translated from the French of the Abbé Bernal by J. Justamond: Dublin, 1776, vol. i. p. 34.

grandsire. He became a student of Sanskrit, and translated the Upanishads, philosophical treatises appended to the Vedas, into Persian. This was in the year 1657, a year before he was put to death by his younger brother, the bigoted Aurengzebe. This prince's translation was translated into French by Anquetil Duperron, in the year 1795, the fourth year of the French Republic; and was for a long time the principal source from which European scholars derived their knowledge of the sacred literature of the Brahmans.

At the time at which we have now arrived, the reign of Aurengzebe (1658-1707), the cotemporary and rival of Louis XIV., the existence of Sanskrit and Sanskrit literature was known, if not in Europe generally, at least to Europeans in India, particularly to missionaries. Who was the first European that knew of Sanskrit, or that acquired a knowledge of Sanskrit, is difficult to say. When Vasco de Gama landed at Calicut, on the 9th of May, 1498, Padre Pedro began at once to preach to the natives, and had suffered a martyr's death before the discoverer of India returned to Lisbon. Every new ship that reached India brought new missionaries; but for a long time we look in vain in their letters and reports for any mention of Sanskrit or Sanskrit literature. Francis, now St. Francis Xavier, was the first to organize the great work of preaching the Gospel in India (1542); and such were his zeal and devotion, such his success in winning the hearts of high and low, that his friends ascribed to him, among other miraculous gifts, the gift of tongues¹—a gift never claimed by St. Francis himself. It is not, how-

¹ Müllbauer, p. 67.

ever, till the year 1559 that we first hear of the missionaries at Goa studying, with the help of a converted Brahman,¹ the theological and philosophical literature of the country, and challenging the Brahmans to public disputations.

The first certain instance of a European missionary having mastered the difficulties of the Sanskrit language, belongs to a still later period, — to what may be called the period of Roberto de Nobili, as distinguished from the first period, which is under the presiding spirit of Francis Xavier. Roberto de Nobili went to India in 1606. He was himself a man of high family, of a refined and cultivated mind, and he perceived the more quickly the difficulties which kept the higher castes, and particularly the Brahmans, from joining the Christian communities formed at Madura and other places. These communities consisted chiefly of men of low rank, of no education, and no refinement. He conceived the bold plan of presenting himself as a Brahman, and thus obtaining access to the high and noble, the wise and learned, in the land. He shut himself up for years, acquiring in secret a knowledge, not only of Tamil and Telugu, but of Sanskrit. When, after a patient study of the language and literature of the Brahmans, he felt himself strong enough to grapple with his antagonists, he showed himself in public, dressed in the proper garb of the Brahmans, wearing their cord and their frontal mark, observing their diet, and submitting even to the complicated rules of caste. He

¹ Ibid. p. 80. These Brahmans, according to Robert de Nobili, were of a lower class, not initiated in the sacred literature. They were ignorant, he says, "of the books Smarta, Apostamba, and Sutra." — *Müllbauer*, p. 188. Robert himself quotes from the Âpastamba-Sûtra, in his defence, *ibid.* p. 192. He also quotes Scanda Purâna, p. 193; Kadambari, p. 193.

was successful, in spite of the persecutions both of the Brahmans, who were afraid of him, and of his own fellow-laborers, who could not understand his policy. His life in India, where he died as an old blind man, is full of interest to the missionary. I can only speak of him here as the first European Sanskrit scholar. A man who could quote from Manu, from the Purâṇas, and even from works such as the Âpastamba-sûtras, which are known even at present to only those few Sanskrit scholars who can read Sanskrit MSS., must have been far advanced in a knowledge of the sacred language and literature of the Brahmans; and the very idea that he came, as he said, to preach a new or a fourth Veda,¹ which had been lost, shows how well he knew the strong and weak points of the theological system which he came to conquer. It is surprising that the reports which he sent to Rome, in order to defend himself against the charge of idolatry, and in which he drew a faithful picture of the religion, the customs, and literature of the Brahmans, should not have attracted the attention of scholars. The "Accommodation Question," as it was called, occupied cardinals and popes for many years; but not one of them seems to have perceived the extraordinary

¹ *The Ezour-Veda* is not the work of Robert de Nobili. It was probably written by one of his converts. It is in Sanskrit verse, in the style of the Purâṇas, and contains a wild mixture of Hindu and Christian doctrine. The French translation was sent to Voltaire and printed by him in 1778, "*L'Ezour Vedam traduit du Sanscrit par un Brame*." Voltaire expressed his belief that the original was four centuries older than Alexander, and that it was the most precious gift for which the West had been ever indebted to the East. Mr. Ellis discovered the Sanskrit original at Pondichery. (*Asiatic Researches*, vol. xiv.) There is no evidence for ascribing the work to Robert, and it is not mentioned in the list of his works. (Bertrand, *la Mission du Maduré*, Paris, 1847-50, t. iii. p. 116; Müllbauer, p. 205, note.)

interest attaching to the existence of an ancient civilization so perfect and so firmly rooted as to require accommodation even from the missionaries of Rome. At a time when the discovery of one Greek MS. would have been hailed by all the scholars of Europe, the discovery of a complete literature was allowed to pass unnoticed. The day of Sanskrit had not yet come.

The first missionaries who succeeded in rousing the attention of European scholars to the extraordinary discovery that had been made were the French Jesuit missionaries, whom Louis XIV. had sent out to India after the treaty of Ryswick, in 1697.¹ Father Pons drew up a comprehensive account of the literary treasures of the Brahmans; and his report, dated Karikal (dans le Maduré), November 23, 1740, and addressed to Father Duhalde, was published in the "*Lettres édifiantes*."² Father Pons gives in it a most interesting and, in general, a very accurate description of the various branches of Sanskrit literature,—of the four Vedas, the grammatical treatises, the six systems of philosophy, and the astronomy of the Hindus. He anticipated, on several points, the researches of Sir William Jones.

But, although the letter of Father Pons excited a deep interest, that interest remained necessarily barren, as long as there were no grammars, dictionaries, and Sanskrit texts to enable scholars in Europe to study Sanskrit in the same spirit in which they studied Greek and Latin. The first who endeavored to supply this want was a Carmelite friar, a German of the name

¹ In 1677 a Mr. Marshall is said to have been a proficient in Sanskrit. Elliot's *Historians of India*, p. 265.

² See an excellent account of this letter in an article of M. Biot in the "*Journal des Savants*," 1861.

of Johann Philip Wesdin, better known as Paulinus a Santo Bartholomeo. He was in India from 1776 to 1789; and he published the first grammar of Sanskrit at Rome, in 1790. Although this grammar has been severely criticised, and is now hardly ever consulted, it is but fair to bear in mind that the first grammar of any language is a work of infinitely greater difficulty than any later grammar.¹

We have thus seen how the existence of the Sanskrit language and literature was known ever since India had first been discovered by Alexander and his companions. But what was not known was, that this language, as it was spoken at the time of Alexander, and at the time of Solomon, and for centuries before his time, was intimately related to Greek and Latin, in fact, stood to them in the same relation as French to Italian and Spanish. The history of what may be called European Sanskrit philology dates from the foundation of the Asiatic Society at Calcutta, in 1784.² It was through the labors of Sir William Jones, Carey, Wilkins, Forster, Colebrooke, and other members of that illustrious Society, that the language and literature of the Brahmans became first accessible to European

¹ *Sidharubam seu Grammatica Samscrdamica, cui accedit dissertatio historico-critica in linguam Samscrdamicam, vulgo Samscret dictam, in qua hujus linguæ existentia, origo, præstantia, antiquitas, extensio, materinitas ostenditur, libri aliqui in ea exarati critice recensentur, et simul aliquæ antiquissimæ gentilium orationes liturgicæ paucis attinguntur et explicantur autore Paulino a S. Bartholomæo. Romæ, 1790.*

² The earliest publications were the "Bhagavadgita," translated by Wilkins, 1785; the "Hitopadesa," translated by Wilkins, 1787; and the "Sakuntalâ," translated by W. Jones, 1789. Original grammars, without mentioning mere compilations, were published by Colebrooke, 1805; by Carey, 1806; by Wilkins, 1808; by Forster, 1810; by Yates, 1820; by Wilson, 1841. In Germany, Bopp published his grammars in 1827, 1832, 1834; Benfey, in 1852 and 1855.

scholars; and it would be difficult to say which of the two, the language or the literature, excited the deepest and most lasting interest. It was impossible to look, even in the most cursory manner, at the declensions and conjugations, without being struck by the extraordinary similarity, or, in some cases, by the absolute identity of the grammatical forms in Sanskrit, Greek, and Latin. As early as 1778, Halhed remarked, in the preface to his *Grammar of Bengali*,¹ "I have been astonished to find this similitude of Sanskrit words with those of Persian and Arabic, and even of Latin and Greek; and these not in technical and metaphorical terms, which the mutation of refined arts and improved manners might have occasionally introduced; but in the main groundwork of language, in monosyllables, in the names of numbers, and the appellations of such things as could be first discriminated on the immediate dawn of civilization." Sir William Jones (died 1794), after the first glance at Sanskrit, declared that whatever its antiquity, it was a language of most wonderful structure, more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either, yet bearing to both of them a strong affinity. "No philologer," he writes, "could examine the Sanskrit, Greek, and Latin, without believing them to have sprung from some common source, which, perhaps, no longer exists. There is a similar reason, though not quite so forcible, for supposing that both the Gothic and Celtic had the same origin with the Sanskrit. The old Persian may be added to the same family."

¹ Halhed had published in 1776 the "*Code of Gentoo Laws*," a digest of the most important Sanskrit law-books made by eleven Brahmans, by the order of Warren Hastings.

But how was that affinity to be explained? People were completely taken by surprise. Theologians shook their heads; classical scholars looked sceptical; philosophers indulged in the wildest conjectures in order to escape from the only possible conclusion which could be drawn from the facts placed before them, but which threatened to upset their little systems of the history of the world. Lord Monboddo had just finished his great work¹ in which he derives all mankind from a couple of apes, and all the dialects of the world from a language originally framed by some Egyptian gods,² when the discovery of Sanskrit came on him like a thunderbolt. It must be said, however, to his credit, that he at once perceived the immense importance of the discovery. He could not be expected to sacrifice his primæval monkeys or his Egyptian idols; but, with that reservation, the conclusions which he drew from the new evidence placed before him by his friend Mr. Wilkins, the author of one of our first Sanskrit grammars, are highly creditable to the acuteness of the Scotch judge. "There is a language," he writes³ (in 1792), "still existing, and preserved among the Bramins of India, which is a richer and in every respect a finer language than even the Greek of Homer. All the other languages of India have a great resemblance to this lan-

¹ "On the Origin and Progress of Language," second edition, Edinburgh, 1774. 6 vols.

² "I have supposed that language could not be invented without supernatural assistance, and, accordingly, I have maintained that it was the invention of the Dæmon kings of Egypt, who, being more than men, first taught themselves to articulate, and then taught others. But, even among them, I am persuaded there was a progress in the art, and that such a language as the Shanskrit was not at once invented." — *Monboddo, Antient Metaphysics*, vol. iv. p. 357.

³ *Origin and Progress of Language*, vol. vi. p. 97.

guage, which is called the Shanscrit. But those languages are dialects of it, and formed from it, not the Shanscrit from them. Of this, and other particulars concerning this language, I have got such certain information from India, that if I live to finish my history of man, which I have begun in my third volume of 'Antient Metaphysics,' I shall be able clearly to prove that the Greek is derived from the Shanscrit, which was the antient language of Egypt, and was carried by the Egyptians into India, with their other arts, and into Greece by the colonies which they settled there."

A few years later (1795) he had arrived at more definite views on the relation of Sanskrit to Greek; and he writes,¹ "Mr. Wilkins has proved to my conviction such a resemblance betwixt the Greek and the Shanscrit, that the one must be a dialect of the other, or both of some original language. Now the Greek is certainly not a dialect of the Shanscrit, any more than the Shanscrit is of the Greek. They must, therefore, be both dialects of the same language; and that language could be no other than the language of Egypt, brought into India by Osiris, of which, undoubtedly, the Greek was a dialect, as I think I have proved."

Into these theories of Lord Monboddo's on Egypt and Osiris, we need not inquire at present. But it may be of interest to give one other extract, in order to show how well, apart from his men with, and his monkeys without, tails, Lord Monboddo could sift and handle the evidence that was placed before him:—

"To apply these observations to the similarities which

¹ Antient Metaphysics, vol. iv. p. 393.

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Mr. Wilkins has discovered betwixt the Shanscrit and the Greek;—I will begin with these words, which must have been original words in all languages, as the things denoted by them must have been known in the first ages of civility, and have got names; so that it is impossible that one language could have borrowed them from another, unless it was a derivative or dialect of that language. Of this kind are the names of numbers, of the members of the human body, and of relations, such as that of father, mother, and brother. And first, as to numbers, the use of which must have been coeval with civil society. The words in the Shanscrit for the numbers from one to ten are, *ek*, *dwée*, *tree*, *chatoor*, *panch*, *shat*, *sapt*, *aght*, *nava*, *das*, which certainly have an affinity to the Greek or Latin names for those numbers. Then they proceed towards twenty, saying ten and one, ten and two, and so forth, till they come to twenty; for their arithmetic is decimal as well as ours. Twenty they express by the word *veensatee*. Then they go on till they come to thirty, which they express by the word *treensat*, of which the word expressing three is part of the composition, as well as it is of the Greek and Latin names for those numbers. And in like manner they go on expressing forty, fifty, &c., by a like composition with the words expressing simple numerals, namely, four, five, &c., till they come to the number one hundred, which they express by *sat*, a word different from either the Greek or Latin name for that number. But, in this numeration, there is a very remarkable conformity betwixt the word in Shanscrit expressing twenty or twice ten, and the words in Greek and Latin expressing the same number; for in none of the three languages has the word any relation to the

number two, which, by multiplying ten, makes twenty ; such as the words expressing the numbers thirty, forty, &c., have to the words expressing three or four ; for in Greek the word is *eikosi*, which expresses no relation to the number two ; nor does the Latin *viginti*, but which appears to have more resemblance to the Sanskrit word *veensatee*. And thus it appears that in the anomalies of the two languages of Greek and Latin, there appears to be some conformity with the Sanskrit."

Lord Monboddo compares the Sanskrit *pada* with the Greek *pous*, *podos* ; the Sanskrit *nāsa* with the Latin *nasus* ; the Sanskrit *deva*, god, with the Greek *Theos* and Latin *deus* ; the Sanskrit *ap*, water, with the Latin *aqua* ; the Sanskrit *vidhavā* with the Latin *vidua*, widow. Sanskrit words such as *gonia*, for angle, *kentra*, for centre, *hora*, for hour, he points out as clearly of Greek origin, and imported into Sanskrit. He then proceeds to show the grammatical coincidences between Sanskrit and the classical languages. He dwells on compounds such as *tripada*, from *tri*, three, and *pada*, foot — a tripod ; he remarks on the extraordinary fact that Sanskrit, like Greek, changes a positive into a negative adjective by the addition of the *a* privative ; and he then produces what he seems to consider as the most valuable present that Mr. Wilkins could have given him, namely, the Sanskrit forms, *asmi*, I am ; *asi*, thou art ; *asti*, he is ; *santi*, they are ; forms clearly of the same origin as the corresponding forms, *esmi*, *eis*, *esti*, in Greek, and *sunt* in Latin.

Another Scotch philosopher, Dugald Stewart, was much less inclined to yield such ready submission.

No doubt it must have required a considerable effort for a man brought up in the belief that Greek and Latin were either aboriginal languages, or modifications of Hebrew, to bring himself to acquiesce in the revolutionary doctrine that the classical languages were intimately related to a jargon of mere savages ; for such all the subjects of the Great Mogul were then supposed to be. However, if the facts about Sanskrit were true, Dugald Stewart was too wise not to see that the conclusions drawn from them were inevitable. He therefore denied the reality of such a language as Sanskrit altogether, and wrote his famous essay to prove that Sanskrit had been put together, after the model of Greek and Latin, by those arch-forgers and liars the Brahmans, and that 'the whole of Sanskrit literature was an imposition. I mention this fact, because it shows, better than anything else, how violent a shock was given by the discovery of Sanskrit to prejudices most deeply ingrained in the mind of every educated man. The most absurd arguments found favor for a time, if they could only furnish a loophole by which to escape from the unpleasant conclusion that Greek and Latin were of the same kith and kin as the language of the black inhabitants of India. The first who dared boldly to face both the facts and the conclusions of Sanskrit scholarship was the German poet, Frederick Schlegel. He had been in England during the peace of Amiens (1801-1802), and had learned a smattering of Sanskrit from Mr. Alexander Hamilton. After carrying on his studies for some time at Paris, he published, in 1808, his work, "On the Language and Wisdom of the Indians." This work became the foundation of the science of language.

Though published only two years after the first volume of Adelung's "Mithridates," it is separated from that work by the same distance which separates the Copernican from the Ptolemæan system. Schlegel was not a great scholar. Many of his statements have proved erroneous; and nothing would be easier than to dissect his essay and hold it up to ridicule. But Schlegel was a man of genius; and when a new science is to be created, the imagination of the poet is wanted, even more than the accuracy of the scholar. It surely required somewhat of poetic vision to embrace with *one* glance the languages of India, Persia, Greece, Italy, and Germany, and to rivet them together by the simple name of Indo-Germanic. This was Schlegel's work; and in the history of the intellect, it has truly been called "the discovery of a new world."

We shall see, in our next lecture, how Schlegel's idea was taken up in Germany, and how it led almost immediately to a genealogical classification of the principal languages of mankind.



LECTURE V.

GENEALOGICAL CLASSIFICATION OF LANGUAGES.

WE traced, in our last Lecture, the history of the various attempts at a classification of languages to the year 1808, the year in which Frederick Schlegel published his little work on "The Language and Wisdom of the Indians." This work was like the wand of a magician. It pointed out the place where a mine should be opened; and it was not long before some of the most distinguished scholars of the day began to sink their shafts, and raise the ore. For a time, everybody who wished to learn Sanskrit had to come to England. Bopp, Schlegel, Lassen, Rosen, Burnouf, all spent some time in this country, copying manuscripts at the East-India House, and receiving assistance from Wilkins, Colebrooke, Wilson, and other distinguished members of the old Indian Civil Service. The first minute and scholar-like comparison of the grammar of Sanskrit with that of Greek and Latin, Persian, and German, was made by Francis Bopp, in 1816.¹ Other essays of his followed; and in 1833 appeared the first volume of his "Comparative Grammar of Sanskrit, Zend, Greek, Latin, Lithuanian, Slavonic, Gothic, and German." This work was not finished till nearly twenty years later, in 1852;² but it

¹ Conjugationssystem: Frankfurt, 1816.

² New edition in 1856, much improved.

will form forever the safe and solid foundation of comparative philology. August Wilhelm von Schlegel, the brother of Frederick Schlegel, used the influence which he had acquired as a German poet, to popularize the study of Sanskrit in Germany. His "Indische Bibliothek" was published from 1819 to 1830, and though chiefly intended for Sanskrit literature, it likewise contained several articles on Comparative Philology. This new science soon found a still more powerful patron in William von Humboldt, the worthy brother of Alexander von Humboldt, and at that time one of the leading statesmen in Prussia. His essays, chiefly on the philosophy of language, attracted general attention during his lifetime; and he left a lasting monument of his studies in his great work on the Kawi language, which was published after his death, in 1836. Another scholar who must be reckoned among the founders of Comparative Philology is Professor Pott, whose "Etymological Researches" appeared first in 1833 and 1836.¹ More special in its purpose, but based on the same general principles, was Grimm's "Teutonic Grammar," a work which has truly been called colossal. Its publication occupied nearly twenty years, from 1819 to 1837. We ought, likewise, to mention here the name of an eminent Dane, Erasmus Rask, who devoted himself to the study of the northern languages of Europe. He started, in 1816, for Persia and India, and was the first to acquire a knowledge of Zend, the language of the Zend-Avesta; but he died before he had time to publish all the results of his learned researches. He had proved, however, that the

¹ Second edition, 1859 and 1861. Pott's work on the Language of the Gipsies, 1846; his work on Proper Names, 1856.

sacred language of the Parsis was closely connected with the sacred language of the Brahmans, and that, like Sanskrit, it had preserved some of the earliest formations of Indo-European speech. These researches into the ancient Persian language were taken up again by one of the greatest scholars that France ever produced, by Eugène Burnouf. Though the works of Zoroaster had been translated before by Anquetil Duperron, his was only a translation of a modern Persian translation of the original. It was Burnouf who, by means of his knowledge of Sanskrit and Comparative Grammar, deciphered for the first time the very words of the founder of the ancient religion of light. He was, likewise, the first to apply the same key with real success to the cuneiform inscriptions of Darius and Xerxes; and his premature death will long be mourned, not only by those who, like myself, had the privilege of knowing him personally and attending his lectures, but by all who have the interest of oriental literature and of real oriental scholarship at heart.

I cannot give here a list of all the scholars who followed in the track of Bopp, Schlegel, Humboldt, Grimm, and Burnouf. How the science of language has flourished and abounded may best be seen in the library of any comparative philologist. There has been for the last ten years a special journal of Comparative Philology in Germany. The Philological Society in London publishes every year a valuable volume of its transactions; and in almost every continental university there is a professor of Sanskrit who lectures likewise on Comparative Grammar and the science of language.

But why, it may naturally be asked, why should the

discovery of Sanskrit have wrought so complete a change in the classificatory study of languages? If Sanskrit had been the primitive language of mankind, or at least the parent of Greek, Latin, and German, we might understand that it should have led to quite a new classification of these tongues. But Sanskrit does not stand to Greek, Latin, the Teutonic, Celtic, and Slavonic languages in the relation of Latin to French, Italian, and Spanish. Sanskrit, as we saw before, could not be called their parent, but only their elder sister. It occupies with regard to the classical languages a position analogous to that which Provençal occupies with regard to the modern Romance dialects. This is perfectly true; but it was exactly this necessity of determining distinctly and accurately the mutual relation of Sanskrit and the other members of the same family of speech, which led to such important results, and particularly to the establishment of the laws of phonetic change as the only safe means for measuring the various degrees of relationship of cognate dialects, and thus restoring the genealogical tree of human speech. When Sanskrit had once assumed its right position, when people had once become familiarized with the idea that there must have existed a language more primitive than Greek, Latin, and Sanskrit, and forming the common background of these three, as well as of the Teutonic, Celtic, and Slavonic branches of speech, all languages seemed to fall by themselves into their right position. The key of the puzzle was found, and all the rest was merely a work of patience. The same arguments by which Sanskrit and Greek had been proved to hold co-ordinate rank were perceived to apply with equal strength to Latin and Greek; and

after Latin had once been shown to be more primitive on many points than Greek, it was easy to see that the Teutonic, the Celtic, and the Slavonic languages also, contained each a number of formations which it was impossible to derive from Sanskrit, Greek, or Latin. It was perceived that all had to be treated as co-ordinate members of one and the same class.

The first great step in advance, therefore, which was made in the classification of languages, chiefly through the discovery of Sanskrit, was this, that scholars were no longer satisfied with the idea of a general relationship, but began to inquire for the different degrees of relationship in which each member of a class stood to another. Instead of mere *classes*, we hear now for the first time of well regulated *families* of language.

A second step in advance followed naturally from the first. Whereas, for establishing in a general way the common origin of certain languages, a comparison of numerals, pronouns, prepositions, adverbs, and the most essential nouns and verbs, had been sufficient, it was soon found that a more accurate standard was required for measuring the more minute degrees of relationship. Such a standard was supplied by Comparative Grammar; that is to say, by an intercomparison of the grammatical forms of languages supposed to be related to each other; such intercomparison being carried out according to certain laws which regulate the phonetic changes of letters.

A glance at the modern history of language will make this clearer. There could never be any doubt that the so-called Romance languages, Italian, Wallachian, Provençal, French, Spanish, and Portuguese, were closely related to each other. Everybody could

back again into the more healthy, more primitive, more Latin, *sommes, êtes, sont* ; *sumus, estis, sunt*.

Let us apply the same test to Sanskrit, Greek, and Latin ; and we shall see how their mutual genealogical position is equally determined by a comparison of their grammatical forms. It is as impossible to derive Latin from Greek, or Greek from Sanskrit, as it is to treat French as a modification of Provençal. Keeping to the auxiliary verb *to be*, we find that *I am* is in

Sanskrit	Greek	Lithuanian
<i>asmi</i>	<i>esmi</i>	<i>esmi.</i>

The root is *as*, the termination *mi*.

Now, the termination of the second person is *si*, which, together with *as*, or *es*, would make,

<i>as-si</i>	<i>es-si</i>	<i>es-si.</i>
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But here Sanskrit, as far back as its history can be traced, has reduced *assi* to *asi* ; and it would be impossible to suppose that the perfect, or, as they are sometimes called, organic, forms in Greek and Lithuanian, *es-si*, could first have passed through the mutilated state of the Sanskrit *asi*.

The third person is the same in Sanskrit, Greek, and Lithuanian, *as-ti* or *es-ti* ; and, with the loss of the final *i*, we recognize the Latin *est*, Gothic *ist*, and Russian *est'*.

The same auxiliary verb can be made to furnish sufficient proof that Latin never could have passed through the Greek, or what used to be called the Pelasgic stage, but that both are independent modifications of the same original language. In the singular, Latin is less primitive than Greek ; for *sum* stands for *es-um*, *es* for *es-is*, *est* for *es-ti*. In the first

person plural, too, *sumus* stands for *es-umus*, the Greek *es-mes*, the Sanskrit *'smas*. The second person *es-tis*, is equal to Greek *es-te*, and more primitive than Sanskrit *stha*. But in the third person plural Latin is more primitive than Greek. The regular form would be *as-anti*; this, in Sanskrit, is changed into *santi*. In Greek, the initial *s* is dropped, and the Æolic *enti*, is finally reduced to *eisi*. The Latin, on the contrary, has kept the radical *s*, and it would be perfectly impossible to derive the Latin *sunt* from the Greek *eisi*.

I need hardly say that the modern English, *I am*, *thou art*, *he is*, are only secondary modifications of the same primitive verb. We find in Gothic —

<i>im</i>	for	<i>ism</i>
<i>is</i>	for	<i>iss</i>
<i>ist.</i>		

The Anglo-Saxon changes the *s* into *r*, thus giving —

<i>eom</i> for <i>eorm</i> ,	plural	<i>sind</i> for <i>isind</i> .
<i>eart</i> for <i>ears</i> ,	"	<i>sind</i>
<i>is</i> for <i>ist</i> ,	"	<i>sind</i>

By applying this test to all languages, the founders of comparative philology soon reduced the principal dialects of Europe and Asia to certain families, and they were able in each family to distinguish different branches, each consisting again of numerous dialects, both ancient and modern.

There are many languages, however, which as yet have not been reduced to families, and though there is no reason to doubt that some of them will hereafter be comprehended in a system of genealogical classification, it is right to guard from the beginning

against the common, but altogether gratuitous supposition, that the principle of genealogical classification must be applicable to all. Genealogical classification is no doubt the most perfect of all classifications, but there are but few branches of physical science in which it can be carried out, except very partially. In the science of language, genealogical classification must rest chiefly on the formal or grammatical elements, which, after they have been affected by phonetic change, can be kept up only by a continuous tradition. We know that French, Italian, Spanish, and Portuguese must be derived from a common source, because they share grammatical forms in common, which none of these dialects could have supplied from their own resources, and which have no meaning, or, so to say, no life, in any one of them. The termination of the imperfect *ba* in Spanish, *va* in Italian, by which *canto*, I sing, is changed into *cantaba* and *cantava*, has no separate existence, and no independent meaning in either of these modern dialects. It could not have been formed with the materials supplied by Spanish and Italian. It must have been handed down from an earlier generation in which this *ba* had a meaning. We trace it back to Latin *bam*, in *cantabam*, and here it can be proved that *bam* was originally an independent auxiliary verb, the same which exists in Sanskrit *bhavāmi*, and in the Anglo-Saxon *beom*, I am. Genealogical classification, therefore, applies properly only to decaying languages, to languages in which grammatical growth has been arrested, through the influence of literary cultivation ; in which little new is added, everything old is retained as long as possible, and where what we call growth

must not expect too much, nor be surprised if we find even less than we expected. You remember how the names for father varied in the numerous Friesian dialects. Instead of *frater*, the Latin word for brother, you find *hermano* in Spanish. Instead of *ignis*, the Latin word for fire, you have in French *feu*, in Italian, *fuoco*. Nobody would doubt the common origin of German and English; yet the English numeral "the first," though preserved in *Fürst*, *princeps*, prince, is quite different from the German "Der Erste;" "the second" is quite different from "Der Zweite;" and there is no connection between the possessive pronoun *its*, and the German *sein*. This dialectical freedom works on a much larger scale in ancient and illiterate languages; and those who have most carefully watched the natural growth of dialects will be the least surprised that dialects which had the same origin should differ, not only in their grammatical framework, but likewise in many of those test-words which are very properly used for discovering the relationship of literary languages. How it is possible to say anything about the relationship of such dialects we shall see hereafter. For the present, it is sufficient if I have made it clear why the principle of genealogical classification is not of necessity applicable to all languages; and secondly, why languages, though they cannot be classified genealogically, need not therefore be supposed to have been different from the beginning. The assertion so frequently repeated that the impossibility of classing all languages genealogically proves the impossibility of a common origin of language, is nothing but a kind of scientific dogmatism, which, more than anything else, has impeded the free progress of independent research.

But let us see now how far the genealogical classification of languages has advanced, how many families of human speech have been satisfactorily established. Let us remember what suggested to us the necessity of a genealogical classification. We wished to know the original intention of certain words and grammatical forms in English, and we saw that before we could attempt to fathom the origin of such words as "I love," and "I loved," we should have to trace them back to their most primitive state. We likewise found, by a reference to the history of the Romance dialects, that words existing in one dialect had frequently been preserved in a more primitive form in another, and that, therefore, it was of the highest importance to bring ancient languages into the same genealogical connection by which French, Italian, Spanish, and Portuguese are held together as the members of one family.

Beginning, therefore, with the living language of England, we traced it, without difficulty, to Anglo-Saxon. This carries us back to the seventh century after Christ, for it is to that date that Kemble and Thorpe refer the ancient English epic, the *Beowulf*. Beyond this we cannot go on English soil. But we know that the Saxons, the Angles, and Jutes came from the continent, and there their descendants, along the northern coast of Germany, still speak *Low-German*, or *Nieder-Deutsch*, which in the harbors of Antwerp, Bremen, and Hamburg, has been mistaken by many an English sailor for a corrupt English dialect. The Low-German comprehends many dialects in the north or the lowlands of Germany; but in Germany proper they are hardly ever used for literary purposes. The Friesian dialects are Low-German, so are the

Dutch and Flemish. The Friesian had a literature of its own as early at least as the twelfth century, if not earlier.¹ The Dutch, which is still a popular and literary language, though confined to a small territory, can be traced back to literary documents of the thirteenth century. The Flemish, too, was at that time the language of the court of Flanders and Brabant, but has since been considerably encroached upon, though not yet extinguished, by the official language of the kingdoms of Holland and Belgium. The earliest literary document of Low-German on the Continent is the Christian epic, the *Heljand* (*Heljand* = *Heiliger*, the Healer or Saviour), which is preserved in two MSS. of the ninth century, and was written at that time for the benefit of the newly converted Frisians. We have traces of a certain amount of literature in Saxon or Low-German from that time through the Middle Ages up to the seventeenth century. But little only of that literature has been preserved; and, after the translation of the Bible by Luther into High-German, the fate of Low-German literature was sealed.

The literary language of Germany is, and has been ever since the days of Charlemagne, the *High-German*. It is spoken in various dialects all over Ger-

¹ "Although the Old Friesian documents rank, according to time, with Middle rather than with Old German, the Friesian language stands there in a much more ancient stage, which very nearly approaches that of High-German. The political isolation of the Friesians, and their attachment to their traditional manners and rights, have imparted to their language also a more conservative spirit. After the fourteenth century the old inflections of the Friesian decay most rapidly, whereas in the thirteenth and fourteenth centuries they rival the Anglo-Saxon of the ninth and tenth centuries." — *Grimm, German Grammar* (1st ed.), vol. i. p. lxviii.

² The dialects of Swabia (the Allemannish), of Bavaria and of Franconia along the Main, and of Saxony, &c.

Its history may be traced through three periods. The present, or New High-German period dates from Luther; the Middle High-German period extends from Luther backwards to the twelfth century; the Old High-German period extends from thence to the seventh century.

Thus we see that we can follow the High-German, as well as the Low-German branch of Teutonic speech, back to about the seventh century after Christ. We must not suppose that before that time there was *one* common Teutonic language spoken by all German tribes, and that it afterwards diverged into two streams, — the High and Low. There never was a common, uniform, Teutonic language; nor is there any evidence to show that there existed at any time a uniform High-German or Low-German language, from which all High-German and Low-German dialects are respectively derived. We cannot derive Anglo-Saxon, Friesian, Flemish, Dutch, and Platt-Deutsch from the ancient Low-German, which is preserved in the continental Saxon of the ninth century. All we can say is this, that these various Low-German dialects in England, Holland, Friesland, and Lower Germany, passed at different times through the same stages, or, so to say, the same latitudes of grammatical growth. We may add that, with every century that we go back, the convergence of these dialects becomes more and more decided; but there is no evidence to justify us in admitting the historical reality of *one* primitive and uniform Low-German language from which they were all derived. This is a mere creation of grammarians who cannot understand a multiplicity of dialects without a common type. They would likewise demand the admission of a prim-

itive High-German language, as the source, not only of the literary Old, Middle, and Modern High-German, but likewise of all the local dialects of Austria, Bavaria, Swabia, and Franconia. And they would wish us to believe that, previous to the separation into High and Low German, there existed one complete Teutonic language, as yet neither High nor Low, but containing the germs of both. Such a system may be convenient for the purposes of grammatical analysis, but it becomes mischievous as soon as these grammatical abstractions are invested with an historical reality. As there were families, clans, confederacies, and tribes, before there was a nation; so there were dialects before there was a language. The grammarian who postulates an historical reality for the one primitive type of Teutonic speech, is no better than the historian who believes in a *Francus*, the grandson of Hector, and the supposed ancestor of all the Franks, or in a *Brutus*, the mythical father of all the Britons. When the German races descended, one after the other, from the Danube and from the Baltic, to take possession of Italy and the Roman provinces, — when the Goths, the Lombards, the Vandals, the Franks, the Burgundians, each under their own kings, and with their own laws and customs, settled in Italy, Gaul, and Spain, to act their several parts in the last scene of the Roman tragedy, — we have no reason to suppose that they all spoke one and the same dialect. If we possessed any literary documents of those ancient German races, we should find them all dialects again, some with the peculiarities of High, others with those of Low, German. Nor is this mere conjecture: for it so happens that, by some fortunate accident, the dialect of one

controversy, and on fol. 282, seq., he copied an account of Ulfilas written by Auxentius, the bishop of Dorostorum (Silistria on the Danube), a pupil of Ulfilas. This is followed again by some dissertations of Maximinus, and on foll. 314—327, a treatise addressed to Ambrose by a Semi-arian, a follower of Eusebius, possibly by Prudentius himself, was copied and slightly abbreviated for his own purposes by Maximinus.

It is from Auxentius, as copied by Maximinus, that we learn that Ulfilas died at Constantinople, where he had been invited by the emperor to a disputation. This could not have been later than the year 381, because, according to the same Auxentius, Ulfilas had been bishop for forty years, and, according to Philostorgius, he had been consecrated by Eusebius. Now Eusebius of Nicomedia died 341, and as Philostorgius says that Ulfilas was consecrated by "Eusebius and the bishops who were with him," the consecration has been referred with great plausibility to the beginning of the year 341, when Eusebius presided at the Synod of Antioch. As Ulfilas was thirty years old at the time of his consecration, he must have been born in 311, and as he was seventy years of age when he died at Constantinople, his death must have taken place in 381.

Professor Waitz fixed the death of Ulfilas in 388, because it is stated by Auxentius that other Arian bishops had come with Ulfilas on his last journey to Constantinople, and had actually obtained the promise of a new council from the emperors, but that the heretical party, *i. e.*, the Athanasians, succeeded in getting a law published, prohibiting all disputation on

the faith, whether in public or private. Maximinus, to whom we owe this notice, has added two laws from the Codex Theodosianus, which he supposed to have reference to this controversy, dated respectively 388 and 386. This shows that Maximinus himself was doubtful as to the exact date. Neither of these laws, however, is applicable to the case, as has been fully shown by Dr. Bessell. They are quotations from the Codex Theodosianus made by Maximinus at his own risk, and made in error. If the death of Ulfilas were fixed in 388, the important notice of Philostorgius, that Ulfilas was consecrated by Eusebius, would have to be surrendered, and we should have to suppose that as late as 388 Theodosius had been in treaty with the Arians, whereas after the year 383, when the last attempt at a reconciliation had been made by Theodosius, and had failed, no mercy was any longer shown to the party of Ulfilas and his friends.

If, on the contrary, Ulfilas died at Constantinople in 381, he might well have been called there by the Emperor Theodosius, not to a council, but to a disputation (*ad disputationem*), as Dr. Bessell ingeniously maintains, against the Psathyropolistæ,¹ a new sect of Arians at Constantinople. About the same time, in 380, Sozomén² refers to efforts made by the Arians to gain influence with Theodosius. He mentions, like Auxentius, that these efforts were defeated, and a law published to forbid disputations on the nature of God. This law exists in the Codex Theodosianus, and is dated January 10, 381. But what is most important is, that this law actually revokes a rescript that had

¹ Bessell, l. c. p. 38.

² Sozomenus, H. E. vii. 6.

been obtained fraudulently by the Arian heretics, thus confirming the statement of Auxentius that the emperor had held out to him and his party a promise of a new council.

We now return to Ulfilas. He was born in 311. His parents, as Philostorgius tells us, were of Cappadocian origin, and had been carried away by the Goths as captives from a place called Sadagolthina, near the town of Parnassus. It was under Valerian and Gallienus (about 267) that the Goths made this raid from Europe to Asia, Galatia, and Cappadocia, and the Christian captives whom they carried back to the Danube were the first to spread the light of the Gospel among the Goths. Philostorgius was himself a Cappadocian, and there is no reason to doubt this statement of his on the parentage of Ulfilas. Ulfilas was born among the Goths; Gothic was his native language, though he was able in after-life to speak and write both in Latin and Greek. Philostorgius, after speaking of the death of Crispus (326), and before proceeding to the last years of Constantine, says, that "about that time" Ulfilas led his Goths from beyond the Danube into the Roman empire. They had to leave their country, being persecuted on account of their Christianity. Ulfilas was the leader of the faithful flock, and came to Constantine, (not Constantius,) as ambassador. This must have been before 337, the year of Constantine's death. It may have been in 328, when Constantine had gained a victory over the Goths; and though Ulfilas was then only seventeen years of age, this would be no reason for rejecting the testimony of Philostorgius, who says that Constantine treated Ulfilas with great respect, and called him the

deserves no credit. Ulfilas, according to his own confession, was always an Arian (*semper sic credidi*). Socrates says that Ulfilas was present at the Synod of Constantinople in 360, which may be true, though neither Auxentius nor Philostorgius mentions it. The author of the Acts of Nicetas speaks of Ulfilas as present at the Council of Nicæa, in company with Theophilus. Theophilus, it is true, signed his name as a Gothic bishop at that council, but there is nothing to confirm the statement that Ulfilas, then fourteen years of age, was with Theophilus.

Ulfilas translated the whole Bible, except the Books of Kings. For the Old Testament he used the Septuagint; for the New, the Greek text; but not exactly in that form in which we have it. Unfortunately, the greater part of his work has been lost, and we have only considerable portions of the Gospels, all the genuine Epistles of St. Paul, though again not complete; fragments of a Psalm, of Ezra, and Nehemiah.¹

¹ Auxentius thus speaks of Ulfilas, (Waitz, p. 19:) "*Et [ita prædic]-ante et per Cristum cum dilectione Deo Patri gratias agente, hæc et his similia exsequente, quadraginta annis in episcopatu gloriose florens, apostolica gratia Græcam et Latinam et Gothicam linguam sine intermissione in una et sola ecclesia Christi predicavit. . . . Qui et ipsis tribus linguis plures tractatus et multas interpretationes volentibus ad utilitatem et ad ædificationem, sibi ad æternam memoriam et mercedem post se dereliquit. Quem condigne laudare non sufficio et penitus tacere non audeo; cui plus omnium ego sum debitor, quantum et amplius in me laboravit, qui me a prima etate mea a parentibus meis discipulum suscepit et sacras litteras docuit et veritatem manifestavit et per misericordiam Dei et gratiam Christi et carnaliter et spiritaliter ut filium suum in fide educavit.*"

"Hic Dei providentia et Christi misericordia propter multorum salutem in gente Gothorum de lectore triginta annorum episcopus est ordinatus, ut non solum esset heres Dei et coheres Christi, sed et in hoc per gratiam Christi imitator Christi et sanctorum ejus, ut quemadmodum sanctus David triginta annorum rex et profeta est constitutus, ut regeret et doceret populum Dei et filios Hisdrael, ita et iste beatus tamquam profeta est manifestatus et sacerdos Christi ordinatus, ut regeret et corrigeret et doceret et ædificaret

advanced into Spain and Italy. The Gothic language died out in the ninth century, and after the extinction of the great Gothic empires, the translation of *Ulfilas* was lost and forgotten. But a MS. of the fifth century had been preserved in the Abbey of Werden, and towards the end of the sixteenth century, a man of the name of Arnold Mercator, who was in the service of William IV., the Landgrave of Hessa, drew attention to this old parchment containing large fragments of the translation of *Ulfilas*. The MS., known as the *Codex Argenteus*, was afterwards transferred to Prague, and when Prague was taken in 1648 by Count Königsmark, he carried this Codex to Upsala in Sweden, where it is still preserved as one of the greatest treasures. The parchment is purple, the letters in silver, and the MS. bound in solid silver.

In 1818, Cardinal Mai and Count Castiglione discovered some more fragments in the Monastery of Bobbio, where they had probably been preserved ever since the Gothic empire of Theodoric the Great in Italy had been destroyed.

Ulfilas must have been a man of extraordinary power to conceive, for the first time, the idea of translating the Bible into the vulgar language of his people. At his time, there existed in Europe but two languages which a Christian bishop would have thought himself justified in employing, Greek and Latin. All other languages were still considered as barbarous. It required a pro-

Constantinopolim venissent, ibique etiam et imperatores adissent, adque eis promissum fuisset concil[i]um, ut sanctus Aux[en]tius exposuit, [a]gnita promiss[i]one prefati pr[e]positi heretic[i] omnibus viribu[s] institerunt u[t] lex daretur, qu[æ] concilium pro[hi]beret, sed nec p[ri]vatim in domo [nec] in publico, vel i[n] quolibet loco di[s]putatio de fide haberetur, sic[ut] textus indicat [le]gis, etc."

phetic sight, and a faith in the destinies of these half-savage tribes, and a conviction also of the utter effeteness of the Roman and Byzantine empires, before a bishop could have brought himself to translate the Bible into the vulgar dialect of his barbarous countrymen.' Soon after the death of Ulfilas, the number of Christian Goths at Constantinople had so much increased as to induce Chrysostom, the bishop of Constantinople (397-405), to establish a church in the capital, where the service was to be read in Gothic.¹

The language of Ulfilas, the Gothic, belongs, through its phonetic structure, to the Low-German class, but in its grammar it is, *with few exceptions*, far more primitive than the Anglo-Saxon of the Beowulf, or the Old High-German of Charlemagne. These few exceptions, however, are very important, for they show that it would be grammatically, and therefore historically, impossible to derive either Anglo-Saxon or High-German, or both,² from Gothic. It would be impossible, for instance, to treat the first person plural of the indicative present, the Old High-German *nerjamês*, as a corruption of the Gothic *nasjam*; for we know, from the Sanskrit *masi*, the Greek *mes*, the Latin *mus*, that this was the original termination of the first person plural.

Gothic is but one of the numerous dialects of the German race; some of which became the feeders of the literary languages of the British Isles, of Holland, Friesland, and of Low and High Germany, while others became extinct, and others rolled on from century to century unheeded, and without ever producing any

¹ Theodoret. H. E. V., 30.

² For instances where Old High-German is more primitive than Gothic, see Schleicher, *Zeitschrift für V. S.*, b. iv. s. 266. Bugge, *ibid.*, b. v. s. 59.

literature at all. It is because Gothic is the only one of these parallel dialects that can be traced back to the fourth century, whereas the others disappear from our sight in the seventh, that it has been mistaken by some for the original source of all Teutonic speech. The same arguments, however, which we used against Raynouard, to show that Provençal could not be considered as the parent of the Six Romance dialects, would tell with equal force against the pretensions of Gothic to be considered as more than the eldest sister of the Teutonic branch of speech.

There is, in fact, a third stream of Teutonic speech, which asserts its independence as much as High-German and Low-German, and which it would be impossible to place in any but a co-ordinate position with regard to Gothic, Low and High German. This is the *Scandinavian* branch. It consists at present of three literary dialects, those of Sweden, Denmark, and Iceland, and of various local dialects, particularly in secluded valleys and fiords of Norway,¹ where, however, the literary language is Danish.

It is commonly supposed² that, as late as the eleventh century, identically the same language was spoken in Sweden, Norway, and Denmark, and that this language was preserved almost intact in Iceland, while in Sweden and Denmark it grew into two new national dialects. Nor is there any doubt that the Icelandic skald recited his poems in Iceland, Norway, Sweden, Denmark, nay, even among his countrymen in England and Gardariki, without fear of not being understood, till, as it is said, William introduced Welsh, i. e. French, into England,

¹ See Schleicher, *Deutsche Sprache*, p. 94.

² *Ibid.* s. 60.

Norway, became a kind of America to the Puritans and Republicans of the Scandinavian peninsula. Harald Haarfagr (850-933) had conquered most of the Norwegian kings, and his despotic sway tended to reduce the northern freemen to a state of vassalage. Those who could not resist, and could not bring themselves to yield to the sceptre of Harald, left their country and migrated to France, to England, and to Iceland (874). They were mostly nobles and freemen, and they soon established in Iceland an aristocratic republic, such as they had had in Norway before the days of Harald. This northern republic flourished ; it adopted Christianity in the year 1000. Schools were founded, two bishoprics were established, and classical literature was studied with the same zeal with which their own national poems and laws had been collected and interpreted by native scholars and historians. The Icelanders were famous travellers, and the names of Icelandic students are found not only in the chief cities of Europe, but in the holy places of the East. At the beginning of the twelfth century Iceland counted 50,000 inhabitants. Their intellectual and literary activity lasted to the beginning of the thirteenth century, when the island was conquered by Hakon VI., king of Norway. In 1380, Norway, together with Iceland, was united with Denmark ; and when, in 1814, Norway was ceded to Sweden, Iceland remained, as it is still, under Danish sway.

The old poetry which flourished in Norway in the eighth century, and which was cultivated by the skalds in the ninth, would have been lost in Norway itself had it not been for the jealous care with which it was preserved by the emigrants of Iceland. The most important branch of their traditional poetry were short

songs (hliod or Quida), relating the deeds of their gods and heroes. It is impossible to determine their age, but they existed at least previous to the migration of the Northmen to Iceland, and probably as early as the seventh century, the same century which yields the oldest remnants of Anglo-Saxon, Low-German, and High-German. They were collected in the middle of the twelfth century by *Saemund Sigfusson* (died 1133). In 1643 a similar collection was discovered in MSS. of the thirteenth century, and published under the title of *Edda*, or Great-Grandmother. This collection is called the old or poetic Edda, in order to distinguish it from a later work ascribed to Snorri Sturluson (died 1241). This, the younger or prose Edda, consists of three parts: the mocking of Gylfi, the speeches of Bragi, and the Skalda, or *Ars poetica*. Snorri Sturluson has been called the Herodotus of Iceland; and his chief work is the "Heimskringla," the world-ring, which contains the northern history from the mythic times to the time of King Magnus Erlingsson (died 1177). It was probably in preparing his history that, like Cassiodorus, Saxo Grammaticus, Paulus Diaconus, and other historians of the same class, Snorri collected the old songs of the people; for his "Edda," and particularly his "Skalda," are full of ancient poetic fragments.

The "Skalda," and the rules which it contains, represent the state of poetry in the thirteenth century; and nothing can be more artificial, nothing more different from the genuine poetry of the old "Edda" than this *Ars poetica* of Snorri Sturluson. One of the chief features of this artificial or skaldic poetry was this, that nothing should be called by its

proper name. A ship was not to be called a ship, but the beast of the sea ; blood, not blood, but the dew of pain, or the water of the sword. A warrior was not spoken of as a warrior, but as an armed tree, the tree of battle. A sword was the flame of wounds. In this poetical language, which every skald was bound to speak, there were no less than 115 names for Odin ; an island could be called by 120 synonymous titles. The specimens of ancient poetry which Snorri quotes are taken from the skalds, whose names are well known in history, and who lived from the tenth to the thirteenth century. But he never quotes from any song contained in the old "Edda,"¹ whether it be that those songs were considered by himself as belonging to a different and much more ancient period of literature, or that they could not be used in illustration of the scholastic rules of skaldic poets, these very rules being put to shame by the simple style of the national poetry, which expressed what it had to express without effort and circumlocution.

We have thus traced the modern Teutonic dialects back to four principal channels, — the *High-German*, *Low-German*, *Gothic*, and *Scandinavian* ; and we have seen that these four, together with several minor dialects, must be placed in a co-ordinate position from the beginning, as so many varieties of Teutonic speech. This Teutonic speech may, for convenience' sake, be spoken of as one, — as one branch of that great family of language to which, as we shall see, it belongs ; but

¹ The name Edda is not found before the fourteenth century. Snorri Sturluson does not know the word Edda, nor any collection of ancient poems attributed to Saemund ; and though Saemund may have made the first collection of national poetry, it is doubtful whether the work which we possess under his name is his.

of the Grisons of Switzerland, called the Roumansch or Romanese.¹ The Provençal, which, in the poetry of the Troubadours, attained at a very early time to a high literary excellence, has now sunk down to a mere *patois*. The earliest Provençal poem, the Song of Boëthius, is generally referred to the tenth century: Le Bœuf referred it to the eleventh. But in the lately discovered Song of Eulalia, we have now a specimen of the Langue d'Oil, or the ancient Northern French, anterior in date to the earliest poetic specimen of the Langue d'Oc, or the ancient Provençal. Nothing can be a better preparation for the study of the comparative grammar of the ancient Aryan languages than a careful perusal of the "Comparative Grammar of the Six Romance Languages" by Professor Diez.

Though in a general way we trace these six Romance languages back to Latin, yet it has been pointed out before that the classical Latin would fail to supply a complete explanation of their origin. Many of the ingredients of the Neo-Latin dialects must be sought for in the ancient dialects of Italy and her provinces. More than one dialect of Latin was spoken there before the rise of Rome, and some important fragments have been preserved to us, in inscriptions, of the Umbrian spoken in the north, and of the Oscan spoken to the south of Rome. The Oscan language, spoken by the Samnites, now rendered intelligible by the labors of Mommsen, the Emperor Aurelian had to cede it to the Goths. Part of the Roman inhabitants then emigrated and settled south of the Danube.

In 489 the Slavonic tribes began their advance into Mœsia and Thracia. They were settled in Mœsia by 678, and eighty years later a province was founded in Macedonia, under the name of Slavina.

¹ The entire Bible has been published by the Bible Society in Romanese, for the Grisons in Switzerland; and in Lower Romanese, or Engadine, as spoken on the borders of the Tyrol.

had produced a literature before the time of Livius Andronicus ; and the tables of Iguvium, so elaborately treated by Aufrecht and Kirchhoff, bear witness to a priestly literature among the Umbrians at a very early period. Oscan was still spoken under the Roman emperors, and so were minor local dialects in the south and the north. As soon as the literary language of Rome became classical and unchangeable, the first start was made in the future career of those dialects which, even at the time of Dante, are still called *vulgar* or *popular*.¹ A great deal, no doubt, of the corruption of these modern dialects is due to the fact that, in the form in which we know them after the eighth century, they are really Neo-Latin dialects as adopted by the Teutonic barbarians ; full, not only of Teutonic words, but of Teutonic idioms, phrases, and constructions. French is provincial Latin as spoken by the Franks, a Teutonic race ; and, to a smaller extent, the same *barbarizing* has affected all other Roman dialects. But from the very beginning, the stock with which the Neo-Latin dialects started was not the classical Latin, but the vulgar, local, provincial dialects of the middle, the lower, and the lowest classes of the Roman Empire. Many of the words which give to French and Italian their classical appearance, are really of much later date, and were imported into them by mediæval scholars, lawyers, and divines ; thus escaping the rough treatment to which the original vulgar dialects were subjected by the Teutonic conquerors.

The next branch of the Indo-European family of

¹ " Ed il primo, così Dante, che cominciò a dire come poeta volgare, si mosse, perocchè volle far intendere le sue parole a donna alla quale era malagevole ad intendere versi Latini." — *Vita Nuova*.

of the Grisons of Switzerland, called the Roumansch or Romanese.¹ The Provençal, which, in the poetry of the Troubadours, attained at a very early time to a high literary excellence, has now sunk down to a mere *patois*. The earliest Provençal poem, the Song of Boëthius, is generally referred to the tenth century: Le Bœuf referred it to the eleventh. But in the lately discovered Song of Eulalia, we have now a specimen of the Langue d'Oil, or the ancient Northern French, anterior in date to the earliest poetic specimen of the Langue d'Oc, or the ancient Provençal. Nothing can be a better preparation for the study of the comparative grammar of the ancient Aryan languages than a careful perusal of the "Comparative Grammar of the Six Romance Languages" by Professor Diez.

Though in a general way we trace these six Romance languages back to Latin, yet it has been pointed out before that the classical Latin would fail to supply a complete explanation of their origin. Many of the ingredients of the Neo-Latin dialects must be sought for in the ancient dialects of Italy and her provinces. More than one dialect of Latin was spoken there before the rise of Rome, and some important fragments have been preserved to us, in inscriptions, of the Umbrian spoken in the north, and of the Oscan spoken to the south of Rome. The Oscan language, spoken by the Samnites, now rendered intelligible by the labors of Mommsen, the Emperor Aurelian had to cede it to the Goths. Part of the Roman inhabitants then emigrated and settled south of the Danube.

In 489 the Slavonic tribes began their advance into Mœsia and Thracia. They were settled in Mœsia by 678, and eighty years later a province was founded in Macedonia, under the name of Slavonia.

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speech is the *Hellenic*. Its history is well known from the time of Homer to the present day. The only remark which the comparative philologist has to make is that the idea of making Greek the parent of Latin, is more preposterous than deriving English from German; the fact being that there are many forms in Latin more primitive than their corresponding forms in Greek. The idea of Pelasgians as the common ancestors of Greeks and Romans is another of those grammatical mythes, but hardly requires at present any serious refutation.

The fourth branch of our family is the *Celtic*. The Celts seem to have been the first of the Aryans to arrive in Europe; but the pressure of subsequent migrations, particularly of Teutonic tribes, has driven them towards the westernmost parts, and latterly from Ireland across the Atlantic. At present the only remaining dialects are the Kymric and Gadhelic. The *Kymric* comprises the *Welsh*; the *Cornish*, lately extinct; and the *Armorican*, of Brittany. The *Gadhelic* comprises the *Irish*; the *Galic* of the west coast of Scotland; and the dialect of the *Isle of Man*. Although these Celtic dialects are still spoken, the Celts themselves can no longer be considered an independent nation, like the Germans or Slaves. In former times, however, they not only enjoyed political autonomy, but asserted it successfully against Germans and Romans. Gaul, Belgium, and Britain were Celtic dominions, and the north of Italy was chiefly inhabited by them. In the time of Herodotus we find Celts in Spain; and Switzerland, the Tyrol, and the country south of the Danube have once been the seats of Celtic tribes. But after repeated inroads into the regions of civilization,

now spoken by the Lithuanian peasant, there are some grammatical forms more primitive, and more like Sanskrit, than the corresponding forms in Greek and Latin.

The *Old Prussian*, which is nearly related to Lithuanian, became extinct in the seventeenth century, and the entire literature which it has left behind consists in an old catechism.

Lettish is the language of Kurland and Livonia, more modern in its grammar than Lithuanian, yet not immediately derived from it.

We now come to the *Slavonic* languages, properly so called. The eastern branch comprehends the *Russian* with various local dialects; the *Bulgarian*, and the *Illyrian*. The most ancient document of this eastern branch is the so-called Ecclesiastical Slavonic, *i. e.* the ancient Bulgarian, into which Cyrillus and Methodius translated the Bible, in the middle of the ninth century. This is still the authorized version¹ of the Bible for the whole Slavonic race; and to the student of the Slavonic languages, it is what Gothic is to the student of German. The modern Bulgarian, on the contrary, as far as grammatical forms are concerned, is the most reduced among the Slavonic dialects.

Illyrian is a convenient or inconvenient name to comprehend the *Servian*, *Croatian*, and *Slovinian* dialects. Literary fragments of *Slovinian* go back as far as the tenth century.²

The western branch comprehends the language of *Poland*, *Bohemia*, and *Lusatia*. The oldest specimen of Polish belongs to the fourteenth century: the *Psal-*

¹ Oldest dated MS. of 1056, written for Prince Ostromir. Some older written with Glagolitic letters. Schleicher, Beiträge, b. i. s. 20.

Schleicher, s. 22.

language what mathematics are to astronomy. In an introductory course of lectures, however, like the present, it would be out of place to enter on a minute analysis of the grammatical organism of this language of languages.

There is one point only on which I may be allowed to say a few words. I have frequently been asked, "But how can you prove that Sanskrit literature is so old as it is supposed to be? How can you fix any Indian dates before the time of Alexander's conquest? What dependence can be placed on Sanskrit manuscripts which may have been forged or interpolated?" It is easier to ask such questions than to answer them, at least to answer them briefly and intelligibly. But, perhaps, the following argument will serve as a partial answer, and show that Sanskrit was the spoken language of India at least some centuries before the time of Solomon. In the hymns of the Veda, which are the oldest literary compositions in Sanskrit, the geographical horizon of the poets is, for the greater part, limited to the north-west of India. There are very few passages in which any allusions to the sea or the sea-coast occur, whereas the snowy mountains, and the rivers of the Penjáb, and the scenery of the Upper Ganges valley are familiar objects to the ancient bards. There is no doubt, in fact, that the people who spoke Sanskrit came into India from the north, and gradually extended their sway to the south and east. Now, at the time of Solomon, it can be proved that Sanskrit was spoken at least as far south as the mouth of the Indus.

You remember the fleet of Tharshish¹ which Solomon had at sea, together with the navy of Hiram, and

¹ 1 Kings viii. 21.

which came once in three years, bringing *gold* and *silver*, *ivory*, *apes*, and *peacocks*. The same navy, which was stationed on the shore of the Red Sea, is said to have fetched gold from *Ophir*,¹ and to have brought, likewise, great plenty of *algum*² trees and precious stones from Ophir.

Well, a great deal has been written to find out where this Ophir was; but there can be no doubt that it was in India. The names for *apes*, *peacocks*, *ivory* and *algum*-trees are foreign words in Hebrew, as much as *gutta-percha* or *tobacco* are in English. Now, if we wished to know from what part of the world *gutta-percha* was first imported into England, we might safely conclude that it came from that country where the name, *gutta-percha*, formed part of the spoken language.³ If, therefore, we can find a language in which the names for peacock, apes, ivory, and algum-tree, which are foreign in Hebrew, are indigenous, we may be certain that the country in which that language was spoken must have been the Ophir of the Bible. That language is no other but Sanskrit.

Apes are called, in Hebrew, *koph*, a word without an etymology in the Semitic languages, but nearly identical in sound with the Sanskrit name of ape, *kapi*.

Ivory is called either *karnoth-shen*, horns of tooth; or *shen habbim*. This *habbim* is again without a derivation in Hebrew, but it is most likely a corruption of the Sanskrit name for elephant, *ibha*, preceded by the Semitic article.⁴

¹ 1 Kings ix. 26.

² 1 Kings x. 11.

³ *Gutta* in Malay means *gum*, *percha* is the name of the tree (*Isonandra gutta*), or of an island from which the tree was first imported (*Pulo-percha*).

⁴ See Lassen, *Indische Alterthumskunde*, b. i. s. 537.

Peacocks are called in Hebrew *tukhi-im*, and this finds its explanation in the name still used for peacock on the coast of Malabar, *togēi*, which in turn has been derived from the Sanskrit *śikhin*, meaning furnished with a crest.

All these articles, ivory, gold, apes, peacocks, are indigenous in India, though of course they might have been found in other countries likewise. Not so the *algum-tree*, at least if interpreters are right in taking *algum* or *almug* for sandalwood. Sandalwood is found indigenous on the coast of Malabar only; and one of its numerous names there, and in Sanskrit, is *valguka*. This *valgu(ka)* is clearly the name which Jewish and Phœnician merchants corrupted into *algum*, and which in Hebrew was still further changed into *almug*.

Now, the place where the navy of Solomon and Hiram, coming down the Red Sea, would naturally have landed, was the mouth of the Indus. There *gold* and *precious stones* from the north would have been brought down the Indus; and *sandalwood*, *peacocks*, and *apes* would have been brought from Central and Southern India. In this very locality Ptolemy (vii. 1) gives us the name of *Abiria*, above *Pattalene*. In the same locality Hindu geographers place the people called *Abhira* or *Ābhira*; and in the same neighborhood MacMurdo, in his account of the province of Cutch, still knows a race of *Ahirs*,¹ the descendants, in all probability, of the people who sold to Hiram and Solomon their gold and precious stones, their apes, peacocks, and sandalwood.²

¹ See also Sir Henry Elliot's Supplementary Glossary, s. v. Aheer.

² The arguments brought forward by Quatremère in his "Mémoire sur le Pays d'Ophir" against fixing Ophir on the Indian coast are not conclu-

risen since to considerable wealth and influence. Other settlements of Guebres are to be found in Yezd and parts of Kerman. A Frenchman, Anquetil Duperron, was the first to translate the Zend-avesta, but his translation was not from the original, but from a modern Persian translation. The first European who attempted to read the original words of Zoroaster was Rask, the Dane; and after his premature death, Burnouf, in France, achieved one of the greatest triumphs in modern scholarship by deciphering the language of the Zend-avesta, and establishing its close relationship with Sanskrit. The same doubts which were expressed about the age and the genuineness of the Veda, were repeated with regard to the Zend-avesta, by men of high authority as oriental scholars, by Sir W. Jones himself, and even by the late Professor Wilson. But Burnouf's arguments, based at first on grammatical evidence only, were irresistible, and have of late been most signally confirmed by the discovery of the cuneiform inscriptions of Darius and Xerxes. That there was a Zoroaster, an ancient sage, was known long before Burnouf. Plato speaks of a teacher of Zoroaster's Magic (*Μαγεία*), and calls Zoroaster the son of *Oromazes*.¹

This name of Oromazes is important; for Oromazes

about 583. Here they stayed 100 years, to 683, then departed to the city of Hormaz (Ormus, in the Persian Gulf), and after staying fifteen years, proceeded in 698 to Diu, an island on the south-west coast of Katiawar. Here they remained nineteen years, to 717, and then proceeded to Sanjān, a town about twenty-four miles south of Damaun. After 300 years they spread to the neighboring towns of Guzerat, and established the sacred fire successively at Barsadah, Nausari, near Surat, and Bombay." — *Bombay Quarterly Review*, 1856, No. viii. p. 67.

¹ Alc. i. p. 122, a. 'Ο μὲν μαγείαν διδάσκει τὴν Ζωροάστρου τοῦ Ὀρομάζου· ἐστὶ δὲ τοῦτο θεῶν θεραπεία.

is clearly meant for *Ormuzd*, the god of the Zoroastrians. The name of this god, as read in the inscriptions of Darius and Xerxes, is *Auramazdâ*, which comes very near to Plato's Oromazes.¹ Thus Darius says, in one passage: "Through the grace of Auramazda I am king; Auramazda gave me the kingdom." But what is the meaning of *Auramazda*? We receive a hint from one passage in the Achæmenian inscriptions, where Auramazda is divided into two words, both being declined. The genitive of Auramazda occurs there as *Aurahya mazdâha*. But even this is unintelligible, and is, in fact, nothing but a phonetic corruption of the name of the supreme Deity as it occurs on every page of the Zend-avesta, namely, *Ahurô mazdâo* (nom.). Here, too, both words are declined; and instead of *Ahurô mazdâo*, we also find *Mazdâo ahurô*.² Well, this *Ahurô mazdâo* is represented in the Zend-avesta as the creator and ruler of the world; as good, holy, and true; and as doing battle against all that is evil, dark, and false. "The wicked perish through the wisdom and holiness of the living wise Spirit." In the oldest hymns, the power of darkness, which is opposed to *Ahurô mazdâo* has not yet received its proper name, which is *Angrô mainyus*, the later *Ahriman*; but it is spoken of as a power, as *Drukhs* or deceit; and the principal doctrine which Zoroaster came to preach was that we must choose between these two powers, that we must be good, and not bad. These are his words:—

"In the beginning there was a pair of twins, two

¹ In the inscriptions we find, nom. *Auramazdâ*, gen. *Auramasdâha*, acc. *Auramazdam*.

² Gen. *Ahurahe mazdâo*, dat. *mazdâi*, acc. *mazdam*.

spirits, each of a peculiar activity. These are the Good and the Base in thought, word, and deed. Choose one of these two spirits. Be good, not base!"¹

Or again:—

"Ahuramazda is holy, true, to be honored through veracity, through holy deeds." "You cannot serve both."

Now, if we wanted to prove that Anglo-Saxon was a real language, and more ancient than English, a mere comparison of a few words such as *lord* and *hlafford*, *gospel* and *godspel* would be sufficient. *Hlafford* has a meaning; *lord* has none; therefore we may safely say that without such a compound as *hlafford*, the word *lord* could never have arisen. The same, if we compare the language of the Zend-avesta with that of the cuneiform inscriptions of Darius. *Auramazdā* is clearly a corruption of *Ahuró mazdāo*, and if the language of the Mountain-records of Behistun is genuine, then, *à fortiori*, is the language of the Zend-avesta genuine, as deciphered by Burnouf, long before he had deciphered the language of Cyrus and Darius. But what is the meaning of *Ahuró mazdāo*? Here Zend does not give us an answer; but we must look to Sanskrit, as the more primitive language, just as we looked from French to Italian, in order to discover the original form and meaning of *feu*. According to the rules which govern the changes of words, common to Zend and Sanskrit, *Ahuró mazdāo* corresponds to the Sanskrit *Asuro medhas*; and this would mean the "Wise Spirit," neither more nor less.

We have editions, translations, and commentaries of

¹ Haug, Lecture, p. 11; and in Bunsen's Egypt.

the Zend-avesta by Burnouf, Brockhaus, Spiegel, and Westergaard. Yet there still remains much to be done. Dr. Haug, now settled at Poona, has lately taken up the work which Burnouf left unfinished. He has pointed out that the text of the Zend-avesta, as we have it, comprises fragments of very different antiquity, and that the most ancient only, the so-called Gâthâs, can be ascribed to Zarathustra. "This portion," he writes in a lecture just received from India, "compared with the whole bulk of the Zend fragments is very small; but by the difference of dialect it is easily recognized. The most important pieces written in this peculiar dialect are called Gâthâs or songs, arranged in five small collections; they have different metres, which mostly agree with those of the Veda; their language is very near to the Vedic dialect." It is to be regretted that in the same lecture, which holds out the promise of so much that will be extremely valuable, Dr. Haug should have lent his authority to the opinion that Zoroaster or Zarathustra is mentioned in the Rig-Veda as Jaradashti. The meaning of jaradashti in the Rig-Veda may be seen in the Sanskrit Dictionary of the Russian Academy, and no Sanskrit scholar would seriously think of translating the word by Zoroaster.

At what time Zoroaster lived, is a more difficult question which we cannot discuss at present.¹ It must

¹ Berosus, as preserved in the Armenian translation of Eusebius, mentions a Median dynasty of Babylon, beginning with a king Zoroaster, long before Ninus; his date would be 2234 B. C.

Xanthus, the Lydian (470 B. C.), as quoted by Diogenes Laertius, places Zoroaster, the prophet, 600 before the Trojan war (1800 B. C.).

Aristotle and Eudoxus, according to Pliny (Hist. Nat. xxx. 1), placed Zoroaster 6000 before Plato; Hermippus 5000 before the Trojan war (Diog. Laert. proœm.).

suffice if we have proved that he lived, and that his language, the Zend, is a real language, and anterior in time to the language of the cuneiform inscriptions.

We trace the subsequent history of the Persian language from Zend to the inscriptions of the Achæmenian dynasty; from thence to what is called *Pehlevi* or *Huzvares̄h* (better Huzûresh), the language of the Sassanian dynasty (226–651), as it is found in the dialect of the translations of the Zend-avesta, and in the official language of the Sassanian coins and inscriptions. This is considerably mixed with Semitic elements, probably imported from Syria. In a still later form, freed also from the Semitic elements which abound in Pehlevi, the language of Persia appears again as *Parsi*, which differs but little from the language of *Firdusi*, the great epic poet of Persia, the author of the *Shahnámeh*, about 1000 A. D. The later history of Persian consists entirely in the gradual increase of Arabic words, which have crept into the language since the conquest of Persia and the conversion of the Persians to the religion of Mohammed.

The other languages which evince by their grammar and vocabulary a general relationship with Sanskrit and Persian, but which have received too distinct and national a character to be classed as mere dialects, are the languages of *Afghanistan* or the *Pushtú*, the language of *Bokhára*, the language of the *Kurds*, the *Ossetian* language in the Caucasus, and the *Armenian*. Much might be said on every one of these tongues and their claims to be classed as independent members of the

Pliny (Hist. Nat. xxx. 2) places Zoroaster several thousand years before Moses the Judæan, who founded another kind of Mageia.

enclosures, nay under the same roof. There was a time when out of many possible names for *father*, *mother*, *daughter*, *son*, *dog* and *cow*, *heaven* and *earth*, those which we find in all the Aryan languages were framed, and obtained a mastery *in the struggle for life* which is carried on among synonymous words as much as among plants and animals. Look at the comparative table of the auxiliary verb AS, to be, in the different Aryan languages. The selection of the root AS out of many roots, equally applicable to the idea of being, and the joining of this root with one set of personal terminations, all originally personal pronouns, were individual acts, or if you like, historical events. They took place once, at a certain date and in a certain place; and as we find the same forms preserved by all the members of the Aryan family, it follows that before the ancestors of the Indians and Persians started for the south, and the leaders of the Greek, Roman, Celtic, Teutonic, and Slavonic colonies marched towards the shores of Europe, there was a small clan of Aryans, settled probably on the highest elevation of Central Asia, speaking a language, not yet Sanskrit or Greek or German, but containing the dialectical germs of all; a clan that had advanced to a state of agricultural civilization; that had recognized the bonds of blood, and sanctioned the bonds of marriage; and that invoked the Giver of Light and Life in heaven by the same name which you may still hear in the temples of Benares, in the basilicas of Rome, and in our own churches and cathedrals.

After this clan broke up, the ancestors of the Indians and Zoroastrians must have remained together for some time in their migrations or new settlements; and I believe that it was the reform of Zoroaster which produced

LECTURE VI.

COMPARATIVE GRAMMAR.

THE genealogical classification of the Aryan languages was founded, as we saw, on a close comparison of the grammatical characteristics of each ; and it is the object of such works as Bopp's " Comparative Grammar " to show that the grammatical articulation of Sanskrit, Zend, Greek, Roman, Celtic, Teutonic, and Slavonic, was produced once and for all ; and that the apparent differences in the terminations of Sanskrit, Greek, and Latin, must be explained by laws of phonetic decay, peculiar to each dialect, which modified the original common Aryan type, and changed it into so many national languages. It might seem, therefore, as if the object of comparative grammar was attained as soon as the exact genealogical relationship of languages had been settled ; and those who only look to the higher problems of the science of language have not hesitated to declare that " there is no painsworthy difficulty nor dispute about declension, number, case, and gender of nouns." But although it is certainly true that comparative grammar is only a means, and that it has well nigh taught us all that it has to teach, — at least in the Aryan family of speech, — it is to be hoped that, in the science of language, it will always retain that prominent place which it has obtained through the labors of Bopp,

Grimm, Pott, Benfey, Curtius, Kuhn, and others. Besides, comparative grammar has more to do than simply to compare. It would be easy enough to place side by side the paradigms of declension and conjugation in Sanskrit, Greek, Latin, and the other Aryan dialects, and to mark both their coincidences and their differences. But after we have done this, and after we have explained the phonetic laws which cause the primitive Aryan type to assume that national variety which we admire in Sanskrit, Greek, and Latin, new problems arise of a more interesting nature. We know that grammatical terminations, as they are now called, were originally independent words, and had their own purpose and meaning. Is it possible, after comparative grammar has established the original forms of the Aryan terminations, to trace them back to independent words, and to discover their original purpose and meaning? You will remember that this was the point from which we started. We wanted to know why the termination *d* in *I loved* should change a present into a past act. We saw that before answering this question we had to discover the most original form of this termination by tracing it from English to Gothic, and afterwards, if necessary, from Gothic to Sanskrit. We now return to our original question, namely, What is language that a mere formal change, such as that of *I love* into *I loved*, should produce so very material a difference?

Let us clearly see what we mean if we make a distinction between the radical and formal elements of a language; and by formal elements I mean not only the terminations of declension and conjugation, but all derivative elements; all, in fact, that is not radical. Our view on the origin of language must chiefly depend on

the view which we take of these formal, as opposed to the radical, elements of speech. Those who consider that language is a conventional production, base their arguments principally on these formal elements. The inflections of words, they maintain, are the best proof that language was made by mutual agreement. They look upon them as mere letters or syllables without any meaning by themselves; and if they were asked why the mere addition of a *d* changes *I love* into *I loved*, or why the addition of the syllable *rai* gave to *j'aime*, I love, the power of a future, *j'aimerai*, they would answer, that it was so because, at a very early time in the history of the world, certain persons, or families, or clans, agreed that it should be so.

This view was opposed by another which represents language as an organic and almost a living being, and explains its formal elements as produced by a principle of growth inherent in its very nature. "Languages,"¹ it is maintained, "are formed by a process, not of crystalline accretion, but of germinal development. Every essential part of language existed as completely (although only implicitly) in the primitive germ, as the petals of a flower exist in the bud before the mingled influences of the sun and the air caused it to unfold." This view was first propounded by Frederick Schlegel,²

¹ Farrar, *Origin of Languages*, p. 35.

² "It has been common among grammarians to regard those terminational changes as evolved by some unknown process from the body of the noun, as the branches of a tree spring from the stem — or as elements, unmeaning in themselves, but employed arbitrarily or conventionally to modify the meanings of words. This latter view is countenanced by Schlegel. 'Languages with inflexions,' says Schlegel, 'are organic languages, because they include a living principle of development and increase, and alone possess, if I may so express myself, a fruitful and abundant vegetation. The wonderful mechanism of these languages consists in forming an immense variety of words, and in marking the connection of ideas expressed by

and it is still held by many with whom poetical phraseology takes the place of sound and severe reasoning.

The science of language adopts neither of these views. As to imagining a congress for settling the proper exponents of such relations as nominative, genitive, singular, plural, active, and passive, it stands to reason that if such abstruse problems could have been discussed in a language void of inflections, there was no inducement for agreeing on a more perfect means of communication. And as to imagining language, that is to say nouns and verbs, endowed with an inward principle of growth, all we can say is, that such a conception is really inconceivable. Language may be conceived as a production, but it cannot be conceived as a substance that could itself produce. But the science of language has nothing to do with mere theories, whether conceivable or not. It collects facts, and its only object is to account for these facts, as far as possible. Instead of looking on inflections in general either as conventional signs or natural excrescences, it takes each termination by itself, establishes its most primitive form by means of comparison, and then treats that primitive syllable as it would treat

these words by the help of an inconsiderable number of syllables, *which, viewed separately, have no signification*, but which determine with precision the sense of the words to which they are attached. By modifying radical letters and by adding derivative syllables to the roots, derivative words of various sorts are formed, and derivatives from those derivatives. Words are compounded from several roots to express complex ideas. Finally, substantives, adjectives, and pronouns are declined, with gender, number, and case; verbs are conjugated throughout voices, moods, tenses, numbers, and persons, by employing, in like manner, terminations and sometimes augments, which by themselves signify nothing. This method is attended with the advantage of enunciating in a single word the principal idea, frequently greatly modified, and extremely complex already, with its whole array of accessory ideas and mutable relations.' — *Transactions of the Philological Society*, vol. ii. p. 89.

any other part of language, — namely, as something which was originally intended to convey a meaning. Whether we are still able to discover the original intention of every part of language is quite a different question, and it should be admitted at once that many grammatical forms, after they have been restored to their most primitive type, are still without an explanation. But with every year new discoveries are made by means of careful inductive reasoning. We become more familiar every day with the secret ways of language, and there is no reason to doubt that in the end grammatical analysis will be as successful as chemical analysis. Grammar, though sometimes very bewildering to us in its later stages, is originally a much less formidable undertaking than is commonly supposed. What is grammar after all but declension and conjugation? Originally declension could not have been anything but the composition of a noun with some other word expressive of number and case. How the number was expressed, we saw in a former lecture; and the same process led to the formation of cases.

Thus the locative is formed in various ways in Chinese: ¹ one is by adding such words as *chung*, the middle, or *nei*, inside. Thus, *kúō-chung*, in the empire; *i súi chung*, within a year. The instrumental is formed by the preposition *y*, which preposition is an old root, meaning *to use*. Thus *y ting*, with a stick, where in Latin we should use the ablative, in Greek the dative. Now, however complicated the declensions, regular and irregular, may be in Greek and Latin, we may be certain that originally they were formed by this simple method of composition.

¹ Endlicher, *Chinesische Grammatik*, p. 172.

There was originally in all the Aryan languages a case expressive of locality, which grammarians call the *locative*. In Sanskrit every substantive has its locative, as well as its genitive, dative, and accusative. Thus, *heart* in Sanskrit is *hṛid*; in the heart, is *hṛidi*. Here, therefore, the termination of the locative is simply short *i*. This short *i* is a demonstrative root, and in all probability the same root which in Latin produced the preposition *in*. The Sanskrit *hṛidi* represents, therefore, an original compound, as it were, *heart-within*, which gradually became settled as one of the recognized cases of nouns ending in consonants. If we look to Chinese,¹ we find that the locative is expressed there in the same manner, but with a greater freedom in the choice of the words expressive of locality. "In the empire," is expressed by *kúō cūng*; "within a year," is expressed by *i súi cūng*. Instead of *cūng*, however, we might have employed other terms also, such as, for instance, *néi*, inside. It might be said that the formation of so primitive a case as the locative offers little difficulty, but that this process of composition fails to account for the origin of the more abstract cases, the accusative, the dative, and genitive. If we derive our notions of the cases from philosophical grammar, it is true, no doubt, that it would be difficult to convey by a simple composition the abstract relations supposed to be expressed by the terminations of the genitive, dative, and accusative. But remember that these are only general categories under which philosophers and grammarians endeavored to arrange the facts of language. The people with whom language grew up knew nothing of datives and accusatives. Everything that is abstract

¹ Endlicher, *Chinesische Grammatik*, s. 172.

in language was originally concrete. If people wanted to say the King of Rome, they meant really the King at Rome, and they would readily have used what I have just described as the locative; whereas the more abstract idea of the genitive would never enter into their system of thought. But more than this, it can be proved that the locative has actually taken, in some cases, the place of the genitive. In Latin, for instance, the old genitive of nouns in *a* was *as*. This we find still in *pater familiās*, instead of *pater familiæ*. The Umbrian and Oscan dialects retained the *s* throughout as the sign of the genitive after nouns in *a*. The *æ* of the genitive was originally *ai*, that is to say, the old locative in *i*. "King of Rome," if rendered by *Rex Romæ*, meant really "King at Rome." And here you will see how grammar, which ought to be the most logical of all sciences, is frequently the most illogical. A boy is taught at school, that if he wants to say "I am staying at Rome," he must use the genitive to express the locative. How a logician or grammarian can so twist and turn the meaning of the genitive as to make it express rest in a place, is not for us to inquire; but, if he succeeded, his pupil would at once use the genitive of Carthage (*Carthaginis*) or of Athens (*Athenarum*) for the same purpose, and he would then have to be told that these genitives could not be used in the same manner as the genitive of nouns in *a*. How all this is achieved by what is called philosophical grammar, we know not; but comparative grammar at once removes all difficulty. It is only in the first declension that the locative has supplanted the genitive, whereas *Carthaginis* and *Athenarum*, being real genitives, could never be employed to express a locative.

If the explanation just given of some of the cases in Greek and Latin should seem too artificial or too forced, we have only to think of French in order to see exactly the same process repeated under our eyes. The most abstract relations of the genitive, as, for instance, "The immortality of the soul" (*l'immortalité de l'âme*); or of the dative, as, for instance, "I trust myself to God" (*je me fie à Dieu*), are expressed by prepositions, such as *de* and *ad*, which in Latin had the distinct local meanings of "down from," and "towards." Nay, the English *of* and *to*, which have taken the place of the German terminations *s* and *m*, are likewise prepositions of an originally local character. The only difference between our cases and those of the ancient languages consists in this, — that the determining element is now placed before the word, whereas, in the original language of the Aryans, it was placed at the end.

What applies to the cases of nouns, applies with equal truth to the terminations of verbs. It may seem difficult to discover in the personal terminations of Greek and Latin the exact pronouns which were added to a verbal base in order to express, *I* love, *thou* lovest, *he* loves; but it stands to reason that originally these terminations must have been the same in all languages, — namely, personal pronouns. We may be puzzled by the terminations of *thou lovest* and *he loves*, where *st* and *s* can hardly be identified with the modern *thou* and *he*; but we have only to place all the Aryan dialects together, and we shall see at once that they point back to an original set of terminations which can easily be brought to tell their own story.

Let us begin with modern formations, because we have here more daylight for watching the intricate and

as a verb in the sense of literary composition. All these, he might say, are expressed in that strange dialect by the sound *rait* (right, rite, wright, write). He might likewise observe that this dialect, as poor almost as Chinese, had hardly any grammatical inflections, and that it had no genders, except in a few words such as man-of-war, and a railway-engine, which were both conceived as feminine beings, and spoken of as *she*. He might then mention an even more extraordinary feature, namely, that although this language had no terminations for the masculine and feminine genders of nouns, it employed a masculine and feminine termination after the affirmative particle, according as it was addressed to a lady or a gentleman. Their affirmative particle being the same as the English, *Yes*, they added a final *r* to it if addressed to a man, and a final *m* if addressed to a lady : that is to say, instead of simply saying, *Yes*, these descendants of the escaped American slaves said *Yesr* to a man, and *Yesm* to a lady.

Absurd as this may sound, I can assure you that the descriptions which are given of the dialects of savage tribes, as explained for the first time by travellers or missionaries, are even more extraordinary. But let us consider now what the student of language would have to do, if such forms as *Yesr* and *Yesm* were, for the first time, brought under his notice. He would first have to trace them back historically, as far as possible to their more original types, and if he discovered their connection with *Yes Sir* and *Yes Ma'm*, he would point out how such contractions were most likely to spring up in a vulgar dialect. After having traced back the *Yesr* and *Yesm* of the free African negroes

reveals the fact that the white masters of the American slaves who crossed the Atlantic after the time of Chaucer, had crossed the Channel at an earlier period after leaving the continental fatherland of the Angles and Saxons. The words *Sir* and *Madam* tell us still more. They are Norman words, and they could only have been imposed on the Anglo-Saxons of Britain by Norman conquerors. They tell us more than this. For these Normans or Northmen spoke originally a Teutonic dialect, closely allied to Anglo-Saxon, and in that dialect words such as *Sir* and *Madam* could never have sprung up. We may conclude therefore that, previous to the Norman conquest, the Teutonic Northmen must have made a sufficiently long stay in one of the Roman provinces to forget their own and adopt the language of the Roman Provincials.

We may now trace back the Norman *Madam* to the French *Madame*, and we recognize in this a corruption of the Latin *Mea domina*, my mistress. *Domina* was changed into *domna*, *donna*, and *dame*, and the same word *Dame* was also used as a masculine in the sense of lord, as a corruption of *Domino*, *Domno* and *Donno*. The temporal lord ruling as ecclesiastical seigneur under the bishop, was called a *vidame*, as the Vidame of Chartres, &c. The French interjection *Dame!* has no connection with a similar exclamation in English, but it simply means Lord! *Dame-Dieu* in old French is Lord God. A derivative of *Domina*, mistress, was *dominicella*, which became *Demoiselle* and *Damsel*. The masculine *Dame* for *Domino*, Lord, was afterwards replaced by the Latin *Senior*, a translation of the German *elder*. This word *elder* was a title of honor, and we have it still both in *alderman*, and in what is originally the same, the Eng-

ting out on their discovery of the world. All this, and even more, may be read in the vast archives of language. The very name of India has a story to tell, for India is not a native name. We have it from the Romans, the Romans from the Greeks, the Greeks from the Persians. And why from the Persians? Because it is only in Persian that an initial *s* is changed into *h*, which initial *h* was as usual dropped in Greek. It is only in Persian that the country of the *Sindhu* (*sindhu* is the Sanskrit name for *river*), or of the *seven sindhus*, could have been called *Hindia* or *India* instead of *Sindia*. Unless the followers of Zoroaster had pronounced every *s* like *h*, we should never have heard of the West Indies!

We have thus seen by an imaginary instance what we must be prepared for in the growth of language, and we shall now better understand why it must be laid down as a fundamental principle in Comparative Grammar to look upon nothing in language as merely formal, till every attempt has been made to trace the formal elements of language back to their original and substantial prototypes. We are accustomed to the idea of grammatical terminations modifying the meaning of words. But words can be modified by words only; and though in the present state of our science it would be too much to say that all grammatical terminations have been traced back to original independent words, so many of them have, even in cases where only a single letter was left, that we may well lay it down as a rule that all formal elements of language were originally substantial. Suppose English had never been written down before the time of Piers Ploughman. What should we make of such a form as

Provençal the apparent termination of the future used as an independent word and not yet joined to the infinitive. We find in Spanish, instead of "*lo hare*," I shall do it, the more primitive form *hacer lo he*, i. e., *facere id habeo*. We find in Provençal, *dir vos ai* instead of *je vous dirai*; *dir vos em* instead of *nous vous dirons*. There can be no doubt, therefore, that the Romance future was originally a compound of the auxiliary verb *to have* with an infinitive; and *I have to say*, easily took the meaning of *I shall say*.

Here, then, we see clearly how grammatical forms arise. A Frenchman looks upon his futures as merely grammatical forms. He has no idea, unless he is a scholar, that the terminations of his futures are identical with the auxiliary verb *avoir*. The Roman had no suspicion that *amabo* was a compound; but it can be proved to contain an auxiliary verb as clearly as the French future. The Latin future was destroyed by means of phonetic corruption. When the final letters lost their distinct pronunciation it became impossible to keep the imperfect *amabam* separate from the future *amabo*. The future was then replaced by dialectical regeneration, for the use of *habeo* with an infinitive is found in Latin, in such expressions as *habeo dicere*, I have to say, which would imperceptibly glide into I shall say.¹ In fact, wherever we look we see that the future is expressed by means of composition. We have in English *I shall* and *thou wilt*, which mean originally *I am bound* and *thou intendest*. In German we use *werden*, the Gothic *vairthan*, which means originally to go, to turn towards. In modern Greek we find *thelō*, I will, in *thelō dōsei*, I shall give. In Roumansch we meet

¹ Fuchs, *Romanische Sprachen*, s. 344.

with *vegnir*, to come, forming the future *veng a vegnir*, I shall come; whereas in French *je viens de dire*, I come from saying, is equivalent to "I have just said." The French *je vais dire* is almost a future, though originally it is *vado dicere*, I go to say. The Dorsetshire, "I be gwâin to goo a-pickèn stuones," is another case in point. Nor is there any doubt that in the Latin *bo* of *amabo* we have the old auxiliary *bhû*, to be, and in the Greek future in *σω*, the old auxiliary *as*, to be.¹

We now go back another step, and ask the question which we asked many times before, How can a mere *d* produce so momentous a change as that from *I love* to *I loved*? As we have learnt in the meantime that English goes back to Anglo-Saxon, and is closely related to continental Saxon and Gothic, we look at once to the Gothic imperfect in order to see whether it has preserved any traces of the original compound; for, after what we have seen in the previous cases, we are no doubt prepared to find here, too, grammatical terminations mere remnants of independent words.

In Gothic there is a verb *nasjan*, to nourish. Its preterite is as follows:—

Singular.	Dual.	Plural.
nas-i-da	nas-i-dêdu	nas-i-dêdum.
nas-i-dês	nas-i-dêtuts	nas-i-dêdup.
nas-i-da	—	nas-i-dêdun.

¹ The Greek term for the future is *ὁ μέλλων*, and *μέλλω* is used as an auxiliary verb to form certain futures in Greek. It has various meanings, but they can all be traced back to the Sanskrit *man* (*manyate*), to think. As *anya*, other, is changed to *ἄλλος*, so *manye*, I think, to *μέλλω*. Il. ii. 39: *θήσειν ἔτ' ἐμελλεν ἐπ' ὤλεα τε στοναχὰς τε Τρωσὶ τε καὶ Δαναοῖσι*, "he still thought to lay sufferings on Trojans and Greeks." Il. xxiii. 544: *μέλλεις ἀπαρῆσεσθαι ἕεθλον*, "thou thinkest thou wouldst have stripped me of the prize." Od. xiii. 293: *οὐκ ᾗρ' ἐμελλες λήξεν*; "did you not think of stop-

nasideda. The same contraction has taken place in Anglo-Saxon, not only in the singular but in the plural also. Yet, such is the similarity between Gothic and Anglo-Saxon that we cannot doubt their preterites having been formed on the same last. If there be any truth in inductive reasoning, there must have been an original Anglo-Saxon preterite,¹

Singular.	Plural.
ner-ē-dide	ner-ē-didon.
ner-ē-didest	ner-ē-didon.
ner-ē-dide	ner-ē-didon.

And as *ner-ē-dide* dwindled down to *nerēde*, so *nerēde* would, in modern English, become *nered*. The *d* of the preterite, therefore, which changes *I love* into *I loved* is originally the auxiliary verb *to do*, and *I loved* is the same as *I love did*, or *I did love*. In English dialects, as, for instance, in the Dorset dialect, every preterite, if it expresses a lasting or repeated action, is formed by *I did*,² and a distinction is thus established between “’e died eesterdae,” and “the vo’ke did die by scores;” though originally *died* is the same as *die did*.

It might be asked, however, very properly, how *did* itself, or the Anglo-Saxon *dide*, was formed, and how it received the meaning of a preterite. In *dide* the final *de* is not termination, but it is the root, and the first syllable *di* is a reduplication of the root, the fact being that all preterites of old, or, as they are called, strong verbs, were formed as in Greek and Sanskrit by means of reduplication, reduplication being one of the principal means by which roots were invested with a verbal character.³ The root *do* in Anglo-Saxon is the same

¹ Bopp, *Comp. Grammar*, § 620. Grimm, *German Grammar*, ii. 845.

² Barnes, *Dorsetshire Dialect*, p. 39.

³ See M. M.’s *Letter on the Turanian Languages*, pp. 44, 46.

as the root *thē* in *tithēmi* in Greek, and the Sanskrit root *dhā* in *dadhāmi*. Anglo-Saxon *dide* would therefore correspond to Sanskrit *dadhau*, I placed.

Now, in this manner, the whole, or nearly the whole, grammatical framework of the Aryan or Indo-European languages has been traced back to original independent words, and even the slightest changes which at first sight seem so mysterious, such as *foot* into *feet*, or *I find* into *I found*, have been fully accounted for. This is what is called comparative grammar, or a scientific analysis of all the formal elements of a language preceded by a comparison of all the varieties which one and the same form has assumed in the numerous dialects of the Aryan family. The most important dialects for this purpose are Sanskrit, Greek, Latin, and Gothic; but in many cases Zend, or Celtic, or Slavonic dialects come in to throw an unexpected light on forms unintelligible in any of the four principal dialects. The result of such a work as Bopp's "Comparative Grammar" of the Aryan languages may be summed up in a few words. The whole framework of grammar — the elements of derivation, declension, and conjugation — had become settled before the separation of the Aryan family. Hence the broad outlines of grammar, in Sanskrit, Greek, Latin, Gothic, and the rest, are in reality the same; and the apparent differences can be explained by phonetic corruption, which is determined by the phonetic peculiarities of each nation. On the whole, the history of all the Aryan languages is nothing but a gradual process of decay. After the grammatical terminations of all these languages have been traced back to their most primitive form, it is possible, in many instances, to determine their original meaning. This,

however, can be done by means of induction only ; and the period during which, as in the Provençal *dir vos ai*, the component elements of the old Aryan grammar maintained a separate existence in the language and the mind of the Aryans had closed, before Sanskrit was Sanskrit or Greek Greek. That there was such a period we can doubt as little as we can doubt the real existence of fern forests previous to the formation of our coal fields. We can do even more. Suppose we had no remnants of Latin ; suppose the very existence of Rome and of Latin were unknown to us ; we might still prove, on the evidence of the six Romance dialects, that there must have been a time when these dialects formed the language of a small settlement ; nay, by collecting the words which all these dialects share in common, we might, to a certain extent, reconstruct the original language, and draw a sketch of the state of civilization, as reflected by these common words. The same can be done if we compare Sanskrit, Greek, Latin, Gothic, Celtic, and Slavonic. The words which have as nearly as possible the same form and meaning in all the languages must have existed before the people, who afterwards formed the prominent nationalities of the Aryan family, separated ; and, if carefully interpreted, they, too, will serve as evidence as to the state of civilization attained by the Aryans before they left their common home. It can be proved, by the evidence of language, that before their separation the Aryans led the life of agricultural nomads, — a life such as Tacitus describes that of the ancient Germans. They knew the arts of ploughing, of making roads, of building ships, of weaving and sewing, of erecting houses ; they had counted at least as far as one hundred. They had do-

mesticated the most important animals, the cow, the horse, the sheep, the dog; they were acquainted with the most useful metals, and armed with iron hatchets, whether for peaceful or warlike purposes. They had recognized the bonds of blood and the bonds of marriage; they followed their leaders and kings, and the distinction between right and wrong was fixed by laws and customs. They were impressed with the idea of a divine Being, and they invoked it by various names. All this, as I said, can be proved by the evidence of language. For if you find that languages like Greek, Latin, Gothic, Celtic, or Slavonic, which, after their first separation, have had but little contact with Sanskrit, have the same word, for instance, for *iron* which exists in Sanskrit, this is proof absolute that iron was known previous to the Aryan separation. Now, *iron* is *ais* in Gothic, and *ayas* in Sanskrit, a word which, as it could not have been borrowed by the Indians from the Germans or by the Germans from the Indians, must have existed previous to their separation. We could not find the same name for house in Sanskrit, Greek, Latin, Slavonic, and Celtic,¹ unless houses had been known before the separation of these dialects. In this manner a history of Aryan civilization has been written from the archives of language, stretching back to times far beyond the reach of any documentary history.²

The very name of *Arya* belongs to this history, and I shall devote the rest of this lecture to tracing the origin and gradual spreading of this old word. I had intended to include, in to-day's lecture, a short account

¹ Sk. *dama*; Gr. *δόμος*; L. *domus*; Slav. *domū*; Celt. *daimh*.

² See M. M.'s Essay on Comparative Mythology, Oxford Essays, 1856.

of *comparative mythology*, a branch of our science which restores the original form and meaning of decayed words by the same means by which comparative grammar recovers the original form and meaning of terminations. But my time is too limited ; and, as I have been asked repeatedly why I applied the name of *Aryan* to that family of language which we have just examined, I feel that I am bound to give an answer.

Ârya is a Sanskrit word, and in the later Sanskrit it means *noble, of a good family*. It was, however, originally a national name, and we see traces of it as late as the Law-book of the Mânavas, where India is still called *Ârya-âvarta*, the abode of the *Âryas*.¹ In the old Sanskrit, in the hymns of the Veda, *ârya* occurs frequently as a national name and as a name of honor, comprising the worshippers of the gods of the Brahmans, as opposed to their enemies, who are called in the Veda *Dasyus*. Thus one of the gods, *Indra*, who, in some respects, answers to the Greek Zeus, is invoked in the following words (Rigveda, i. 57, 8): “ Know thou the *Âryas*, O *Indra*, and they who are *Dasyus* ; punish the lawless, and deliver them unto thy servant ! Be thou the mighty helper of the worshippers, and I will praise all these thy deeds at the festivals.”

In the later dogmatic literature of the Vedic age, the name of *Ârya* is distinctly appropriated to the three first castes — the Brahmans, Kshatriyas, *Vaiśyas* — as opposed to the fourth, or the *Śûdras*. In the *Śatapatha-Brâhmaṇa* it is laid down distinctly: “ *Âryas* are only the Brahmans, the Kshatriyas, and *Vaiśyas*, for they are admitted to the sacrifices. They shall not speak with everybody, but only with the Brahman, the

¹ *Ârya-bhûmi*, and *Ârya-deśa* are used in the same sense.



by the Zoroastrians who migrated from India to the north-west, and whose religion has been preserved to us in the Zend-avesta, though in fragments only. Now *Airya* in Zend means venerable, and is at the same time the name of the people.¹ In the first chapter of the Vendidad, where Ahuramazda explains to Zarathustra the order in which he created the earth, sixteen countries are mentioned, each, when created by Ahuramazda, being pure and perfect; but each being tainted in turn by *Angro mainyus* or *Ahriman*. Now the first of these countries is called *Airyanem vaéjō*, *Arianum semen*, the Aryan seed, and its position must have been as far east as the western slopes of the Belurtag and Mustag, near the sources of the Oxus and Yaxartes, the highest elevation of Central Asia.² From this country, which is called their seed, the Aryans advanced towards the south and west, and in the Zend-avesta the whole extent of country occupied by the Aryans is likewise called *Airyā*. A line drawn from India along the Paropamisus and Caucasus Indicus in the east, following in the north the direction between the Oxus and Yaxartes,³ then running along the Caspian Sea, so as to include Hyrcania and Râgha, then turning south-east on the borders of Nisaea, Aria (*i. e.* Haria), and the countries washed by the Etymandrus and Arachotus, would indicate the general horizon of the Zoroastrian world. It would be what is called in the fourth cardé of the Yasht of Mithra, "the whole space of Aria," *vispem airyō-šayanem* (totum Ariæ situm).⁴ Opposed to the Aryan we find in

¹ Lassen, Ind. Alt. b. i. s. 6.

² Ibid. b. i. s. 526.

³ Ptolemy knows 'Αρῖκαί, near the mouth of the Yaxartes. Ptol. vi. 14; Lassen, loc. cit. i. 6.

⁴ Burnouf, Yaśna, notes, 61. In the same sense the Zend-avesta uses

time of Strabo,¹ nearly the same language, and we may well understand, therefore, that they should have claimed for themselves one common name, in opposition to the hostile tribes of Turan.

That *Aryan* was used as a title of honor in the Persian empire is clearly shown by the cuneiform inscriptions of Darius. He calls himself *Ariya* and *Ariya-chitra*, an Aryan and of Aryan descent; and Ahuramazda, or, as he is called by Darius, Auramazda, is rendered in the Turanian translation of the inscription of Behistun, "the god of the Aryans." Many historical names of the Persians contain the same element. The great-grandfather of Darius is called in the inscriptions Ariyârâmnâ, the Greek *Ariaramnēs* (Herod. vii. 90). Ariobarzanēs (*i. e.* Euergetēs), Ariomanes (*i. e.* Eumenēs), Ariomardos, all show the same origin.²

About the same time as these inscriptions, Eudemos, a pupil of Aristotle, as quoted by Damascius, speaks of "the Magi and the whole Aryan race,"³ evidently using Aryan in the same sense in which the Zend-avesta spoke of "the whole country of Aria."

And when, after years of foreign invasion and occupation, Persia rose again under the sceptre of the Sassanians to be a national kingdom, we find the new national kings the worshippers of Masdanes, calling

¹ Heeren, Ideen, i. p. 337: *διόγλωττοι παρὰ μακρόν*. Strabo, p. 1054.

² One of the Median classes is called *Ἀριζαντοί*, which may be *āryajantu*. Herod. i. 101.

³ *Μάγοι δὲ καὶ πᾶν τὸ Ἀρειον γένος, ὡς καὶ τοῦτο γράφει ὁ Εὐδήμος, οἱ μὲν, τόπον, οἱ δὲ χρόνον καλοῦσι τὸ νοητὸν ἅπαν καὶ τὸ ἡνωμένον ἐξ οὗ διακριθῆναι ἢ θεὸν ἄγαθόν καὶ δαίμονα κακὸν ἢ φῶς καὶ σκότος πρὸ τούτων, ὡς ἐνίοις λέγειν. Οὗτοι δὲ οὖν καὶ αὐτοὶ μετὰ τὴν ἀδιάκριτον φύσιν διακρινομένην ποιοῦσι τὴν διττὴν συστοιχὴν τῶν κρειττόνων, τῆς μὲν ἡγεῖσθαι τὸν Ὀρομάσδην, τῆς δὲ τὸν Ἀρειμάνιον.* — Damascius, *questiones de primis principiis*, ed. Kopp, 1826, cap. 125, p. 384

Aryan language, the *Os* of *Ossethi*, and they call themselves *Iron*.¹

Along the Caspian, and in the country washed by the Oxus and Yaxartes, Aryan and non-Aryan tribes were mingled together for centuries. Though the relation between Aryans and Turanians is hostile, and though there were continual wars between them, as we learn from the great Persian epic, the *Shahnámeh*, it does not follow that all the nomad races who infested the settlements of the Aryans, were of Tatar blood and speech. *Turvaśa* and his descendants, who represent the Turanians, are described in the later epic poems of India as cursed and deprived of their inheritance in India. But in the *Vedas* *Turvaśa* is represented as worshipping Aryan gods. Even in the *Shahnámeh*, Persian heroes go over to the Turanians and lead them against Iran, very much as Coriolanus led the Samnites against Rome. We may thus understand why so many Turanian or Scythian names, mentioned by Greek writers, should show evident traces of Aryan origin. *Aspa* was the Persian name for *horse*, and in the Scythian names *Aspabota*, *Aspakara*, and *Asparatha*,² we can hardly fail to recognize the same element. Even the name of the *Aspasian* mountains, placed by Ptolemy in Scythia, indicates a similar origin. Nor is the word *Ârya* unknown beyond the Oxus. There is a people called *Ariacæ*,³ another called *Antariani*.⁴ A

¹ Sjögren, *Ossetic Grammar*, p. 396. Scylax and Apollodorus mention 'Αριοι and 'Αριδία, south of the Caucasus. Pictet, *Origines*, 67; Scylax *Perip.* p. 213, ed. Klausen; Apollodori *Biblioth.* p. 433, ed. Heyne.

² Burnouf, *Notes*, p. 105.

³ Ptol. vi. 2, and vi. 14. There are 'Αναρίαται on the frontiers of Hyrcania. Strabo, xi. 7; Pliny, *Hist. Nat.* vi. 19.

⁴ On *Arimaspi* and *Aramæi*, see Burnouf, *Notes*, p. 105; Plin. vi. 9.

king of the Scythians, at the time of Darius, was called *Ariantes*. A cotemporary of Xerxes is known by the name of *Aripithes* (*i. e.* Sanskrit, *aryapati*; Zend, *airya-paiti*); and *Spargapithes* seems to have some connection with the Sanskrit *svargapati*, lord of heaven.

We have thus traced the name of *Ārya* from India to the west, from *Āryāvarta* to *Ariana*, *Persia*, *Media*, more doubtfully to *Armenia* and *Albania*, to the *Iron* in the *Caucasus*, and to some of the nomad tribes in *Transoxiana*. As we approach Europe the traces of this name grow fainter, yet they are not altogether lost.

Two roads were open to the Aryans of Asia in their westward migrations. One through *Chorasan*¹ to the north, through what is now called *Russia*, and thence to the shores of the *Black Sea* and *Thrace*. Another from *Armenia*, across the *Caucasus* or across the *Black Sea* to *Northern Greece*, and along the *Danube* to *Germany*. Now on the former road the Aryans left a trace of their migration in the old name of *Thrace* which was *Aria*;² on the latter we meet in the eastern part of *Germany*, near the *Vistula*, with a German tribe called *Arii*. And as in *Persia* we found many proper names in which *Arya* formed an important ingredient, so we find again in German history names such as *Ariovistus*.³

Though we look in vain for any traces of this old national name among the *Greeks* and *Romans*, late researches have rendered it at least plausible that it has

¹ *Qairizam* in the *Zend-avesta*, *Udrazmis* in the inscriptions of *Darius*.

² *Stephanus Byzantinus*.

³ *Grimm*, *Rechts alterthümer*, p. 292, traces *Arii* and *Ariovistus* back to the Gothic *harji*, army. If this is right, this part of our argument must be given up.

been preserved in the extreme west of the Aryan migrations, in the very name of *Ireland*. The common etymology of *Erin* is that it means "island of the west," *iar-innis*, or land of the west, *iar-in*. But this is clearly wrong.¹ The old name is *Ériu* in the nominative, more recently *Éire*. It is only in the oblique cases that the final *n* appears, as in *regio*, *regionis*. *Erin* therefore has been explained as a derivative of *Er* or *Eri*, said to be the ancient name of the Irish Celts as preserved in the Anglo-Saxon name of their country, *Írland*.² It is maintained by O'Reilly, though denied by others, that *er* is used in Irish in the sense of noble, like the Sanskrit *ārya*.³

¹ Pictet, *Les Origines Indo-Européennes*, p. 31. "*Iar*, l'ouest, ne s'écrit jamais *er* ou *eir*, et la forme *Iarin* ne se rencontre nulle part pour *Erin*." Zeuss gives *iar-rend*, *insula occidentalis*. But *rend* (recte *rind*) makes *rendo* in the gen. sing.

² Old Norse *írar*, Irishmen, Anglo-Saxon *íra*, Irishman.

³ Though I state these views on the authority of M. Pictet, I think it right to add the following note which an eminent Irish scholar has had the kindness to send me:—"The ordinary name of Ireland, in the oldest Irish MSS., is (*h*)*ériu*, gen. (*h*)*érenn*, dat. (*h*)*ériann*. The initial *h*, is often omitted. Before etymologizing on the word, we must try to fix its Old Celtic form. Of the ancient names of Ireland which are found in Greek and Latin writers, the only one which *hériu* can formally represent is *Hiberio*. The abl. sing. of this form—*Hiberione*—is found in the Book of Armagh, a Latin MS. of the early part of the ninth century. From the same MS. we also learn that a name of the Irish people was *Hyberionaces*, which is obviously a derivative from the stem of *Hiberio*. Now if we remember that the Old Irish scribes often prefixed *h* to words beginning with a vowel (e. g. *h-abunde*, *h-arundo*, *h-erimus*, *h-ostium*), and that they also often wrote *b* for the *v* consonant (e. g. *bobes*, *fribulas*, *corbus*, *fabonius*); if, moreover, we observe that the Welsh and Breton names for Ireland—*Ywerddon*, *Iwerdon*—point to an Old Celtic name beginning with *IVER*—, we shall have little difficulty in giving *Hiberio* a correctly latinized form, viz. *Iverio*. This in Old Celtic would be *Iveriu*, gen. *Iverionos*. So the Old Celtic form of *Fronto* was *Frontú*, as we see from the Gaulish inscription at Vieux Poitiers. As *v* when flanked by vowels is always lost in Irish, *Iveriu* would become *ieriu*, and then, the first two vowels running together, *ériu*. As regards the double *n* in the oblique cases of *ériu*, the genitive *érenn* (e. g.) is to *Iverionos* as the Old Irish *anmann* 'names' is to the Skr. *námnāni*, Lat.

Some of the evidence here collected in tracing the ancient name of the Aryan family, may seem doubtful, and I have pointed out myself some links of the chain uniting the earliest name of India with the modern name of Ireland, as weaker than the rest. But the principal links are safe. Names of countries, peoples, rivers, and mountains, have an extraordinary vitality, and they will remain while cities, kingdoms, and nations pass away. *Rome* has the same name to-day, and will probably have it forever, which was given to it by the earliest Latin and Sabine settlers, and wherever we find the name of Rome, whether in Wallachia, which by the inhabitants is called Rumania, or in the dialects of the Grisons, the Romansch, or in the title of the Romance languages, we know that some threads would lead us back to the Rome of Romulus and Remus, the stronghold of the earliest warriors of Latium. The ruined city near the mouth of the Upper Zab, now

nomina. The doubling of the *n* may perhaps be due to the Old Celtic accent. What then is the etymology of *Iveria*? I venture to think that it may (like the Lat. *Aver-nus*, Gr. Ἀφρο-νός) be connected with the Skr. *avara*, 'posterior,' 'western.' So the Irish *des*, Welsh *deheu*, 'right,' 'south,' is the Skr. *dakṣiṇa*, 'dexter,' and the Irish *dir* (in *an-dir*), if it stand for *pair*, 'east,' is the Skr. *pūrva*, 'anterior.'

M. Pictet regards Ptolemy's Ἰουερνία (Ivernia) as coming nearest to the Old Celtic form of the name in question. He further sees in the first syllable what he calls the Irish *ibh*, 'land,' 'tribe of people,' and he thinks that this *ibh* may be connected not only with the Vedic *ibha*, 'family,' but with the Old High German *eiba*, 'a district.' But, first, according to the Irish phonetic laws, *ibha* would have appeared as *eb* in Old, *eabh* in Modern-Irish. Secondly, the *ei* in *eiba* is a diphthong=Gothic *di*, Irish *di*, *de*, Skr. *ḍ*. Consequently *ibh* and *ibha* cannot be identified with *eiba*. Thirdly, there is no such word as *ibh* in the nom. sing., although it is to be found in O'Reilly's dictionary, along with his explanation of the intensive prefix *er-*, as 'noble,' and many other blunders and forgeries. The form *ibh* is, no doubt, producible, but it is a very modern dative plural of *ib*, 'a descendant.' Irish districts were often called by the names of the occupying clans. These clans were often called 'descendants (*hut*, *hi*, *i*) of such an one.' Hence the blunder of the Irish lexicographer." — W. S.

them, and reminding them of the localities which they had left. Now, as a Persian *h* points to a Sanskrit *s*, *Harôyu* would be in Sanskrit *Saroyu*. One of the sacred rivers of India, a river mentioned in the Veda, and famous in the epic poems as the river of Ayodhyâ, one of the earliest capitals of India, the modern Oude, has the name of *Sarayu*, the modern *Sardju*.¹

As Comparative Philology has thus traced the ancient name of Ârya from India to Europe, as the original title assumed by the Aryans before they left their common home, it is but natural that it should have been chosen as the technical term for the family of languages which was formerly designated as Indo-Germanic, Indo-European, Caucasian, or Japhetic.

¹ It is derived from a root *sar* or *sri*, to go, to run, from which *saras*, water, *sarit*, river, and *Sarayu*, the proper name of the river near Oude; and we may conclude with great probability that this Sarayu or Sarasyu gave the name to the river Arius or Heri, and to the county of 'Aria or Herat. Anyhow 'Aria, as the name of Herat, has no connection with 'Aria the wide country of the Âryas.

LECTURE VII.

THE CONSTITUENT ELEMENTS OF LANGUAGE.

OUR analysis of some of the nominal and verbal formations in the Aryan or Indo-European family of speech has taught us that, however mysterious and complicated these grammatical forms appear at first sight, they are in reality the result of a very simple process. It seems at first almost hopeless to ask such questions as why the addition of a mere *d* should change love present into love past, or why the termination *ai* in French, if added to *aimer*, should convey the idea of love to come. But, once placed under the microscope of comparative grammar, these and all other grammatical forms assume a very different and much more intelligible aspect. We saw how what we now call terminations were originally independent words. After coalescing with the words which they were intended to modify, they were gradually reduced to mere syllables and letters, unmeaning in themselves, yet manifesting their former power and independence by the modification which they continue to produce in the meaning of the words to which they are appended. The true nature of grammatical terminations was first pointed out by a philosopher, who, however wild some of his speculations may be, had certainly caught many a glimpse of the real life and growth of language, I

We call *root* or *radical*, whatever, in the words of any language or family of languages, cannot be reduced to a simpler or more original form. It may be well to illustrate this by a few examples. But, instead of taking a number of words in Sanskrit, Greek, and Latin, and tracing them back to their common centre, it will be more instructive if we begin with a root which has been discovered, and follow it through its wanderings from language to language. I take the root AR, to which I alluded in our last Lecture as the source of the word *Arya*, and we shall thus, while examining its ramification, learn at the same time why that name was chosen by the agricultural nomads, the ancestors of the Aryan race.

This root AR¹ means *to plough*, to open the soil. From it we have the Latin *ar-are*, the Greek *ar-oun*, the Irish *ar*, the Lithuanian *ar-ti*, the Russian *ora-ti*, the Gothic *ar-jan*, the Anglo-Saxon *er-jan*, the modern English *to ear*. Shakespeare says (Richard II. III. 2), "to ear the land that has some hope to grow."

From this we have the name of the plough, or the instrument of earing: in Latin, *ara-trum*; in Greek, *aro-tron*; in Bohemian, *oradto*; in Lithuanian, *arklas*; in Cornish, *aradar*; in Welsh, *arad*;² in Old Norse, *ardhr*. In Old Norse, however, *ardhr*, meaning originally the plough, came to mean earnings or wealth; the plough being, in early times, the most essential possession of the peasant. In the same manner the Latin

¹ AR might be traced back to the Sanskrit root, *ri*, to go (Pott, *Etymologische Forschungen*, i. 218); but for our present purposes the root, AR, is sufficient.

² If, as has been supposed, the Cornish and Welsh words were corruptions of the Latin *ardrum* they would have appeared as *areuder*, *arawd*, respectively.

name for money, *pecunia*, was derived from *pecus*, cattle ; the word *fee*, which is now restricted to the payment made to a doctor or lawyer, was in Old English *feh*, and in Anglo-Saxon *feoh*, meaning cattle and wealth ; for *feoh*, and Gothic *faihu*, are really the same word as the Latin *pecus*, the modern German *vieh*.

The act of ploughing is called *aratia* in Latin ; *arosis* in Greek : and I believe that *aróma*, in the sense of perfume, had the same origin ; for what is sweeter or more aromatic than the smell of a ploughed field ? In Genesis, xxviii. 27, Jacob says "the smell of my son is as the smell of a field which the Lord has blessed."

A more primitive formation of the root *ar* seems to be the Greek *era*, earth, the Sanskrit *irā*, the Old High-German *ëro*, the Gaelic *ire*, *irionn*. It meant originally the ploughed land, afterwards earth in general. Even the word *earth*, the Gothic *airtha*,¹ the Anglo-Saxon *eorthe*, must have been taken originally in the sense of ploughed or cultivated land. The derivative *armentum*, formed like *ju-mentum*, would naturally have been applied to any animal fit for ploughing and other labor in the field, whether ox or horse.

As agriculture was the principal labor in that early state of society when we must suppose most of our Aryan words to have been formed and applied to their definite meanings, we may well understand how a word which originally meant this special kind of labor, was

¹ Grimm remarks justly that *airtha* could not be derived from *arjan*, on account of the difference in the vowels. But *airtha* is a much more ancient formation, and comes from the root *ar*, which root, again, was originally *ri* or *ir* (Benfey, *Kurze Gr.*, p. 27). From this primitive root *ri* or *ir*, we must derive both the Sanskrit *irā* or *irā*, and the Gothic *airtha*. The latter would correspond to the Sanskrit *rita*. The true meaning of the Sanskrit *irā* has never been discovered. The Brahmins explain it as prayer, but this is not its original meaning.



occur in Sanskrit. According to our explanation of a root, however, this number of 1706 would have to be reduced considerably, and though a few new roots would likewise have to be added which Sanskrit grammarians failed to discover, yet the number of primitive sounds, expressive of definite meanings, requisite for the etymological analysis of the whole Sanskrit dictionary would not amount to even one third of that number. Hebrew has been reduced to about 500 roots,¹ and I doubt whether we want a larger number for Sanskrit. This shows a wise spirit of economy on the part of primitive language, for the possibility of forming new roots for every new impression was almost unlimited. Even if we put the number of letters only at twenty-four, the possible number of biliteral and triliteral roots would amount together to 14,400; whereas Chinese, though abstaining from composition and derivation, and therefore requiring a larger number of radicals than any other language, was satisfied with about 450. With these 450 sounds raised to 1263 by various accents and intonations, the Chinese have produced a dictionary of from 40,000 to 50,000 words.²

¹ Renan, *Histoire des Langues sémitiques*, p. 138. Benloew estimates the necessary radicals of Gothic at 600, of modern German at 250, p. 22. Pott thinks that each language has about 1000 roots.

² The exact number in the Imperial Dictionary of Khang-hi amounts to 42,718. About one-fourth part has become obsolete; and one-half of the rest may be considered of rare occurrence, thus leaving only about 15,000 words in actual use. "The exact number of the classical characters is 42,718. Many of them are no longer in use in the modern language, but they occur in the canonical and in the classical books. They may be found sometimes in official documents, when an attempt is made at imitating the old style. A considerable portion of these are names of persons, places, mountains, rivers, &c. In order to compete for the place of imperial historian, it was necessary to know 9,000, which were collected in a separate manual." — *Stanislas Julien*.

class of cuneiform inscriptions, the Persian, there is no reason to doubt that the whole of that cyclopædia will some day be read with the same ease with which we read the mountain records of Darius.

There is, however, another miserable remnant of what was once the literature of the Chaldeans or Babylonians, namely, the "Book of Adam," and similar works preserved by the *Mendaites* or *Nasoreans*, a curious sect settled near Bassora. Though the composition of these works is as late as the tenth century after Christ, it has been supposed that under a modern crust of wild and senseless hallucinations, they contain some grains of genuine ancient Babylonian thought. These *Mendaites* have in fact been identified with the *Nabateans*, who are mentioned as late as the tenth century¹ of our era, as a race purely pagan, and distinct from Jews, Christians, and Mohammedans. In Arabic the name Nabatean² is used for Babylonians,—nay, all the people of Aramaic origin, settled in the earliest times between the Euphrates and Tigris are referred to by that name.³ It is supposed that the Nabateans, who are mentioned about the beginning of the Christian era as a race distinguished for their astronomical and general scientific knowledge, were the ancestors of the mediæval Nabateans, and the descendants of the ancient Babylonians and Chaldeans. You may have lately seen in some literary journals an account of a work called "The Nabatean Agriculture." It exists only in an Arabic translation by Ibn-Wahshiyyah, the Chaldean,⁴ who lived about 900 years

¹ Renan, p. 241.

² Ibid. p. 237.

³ Quatremère, *Mémoire sur les Nabatéens*, p. 116.

⁴ Ibn-Wahshiyyah was a Mussulman, but his family had been converted for three generations only. He translated a collection of Nabatean books.



lies, with the exception of Chinese and its cognate dialects. In the great continent of the Old World the Semitic and Aryan languages occupy only what may be called the four western peninsulas, namely, India with Persia, Arabia, Asia Minor, and Europe; and we have reason to suppose that even these countries were held by Turanian tribes previous to the arrival of the Aryan and Semitic nations.

This Turanian family is of great importance in the science of languages. Some scholars would deny it the name of a family; and if family is only applicable to dialects so closely connected among themselves as the Aryan or Semitic, it would no doubt be preferable to speak of the Turanian as a class or group, and not as a family of languages. But this concession must not be understood as an admission that the members of this class start from different sources, and that they are held together, not by genealogical affinity, but by morphological similarity only.

These languages share elements in common which they must have borrowed from the same source, and their formal coincidences, though of a different character from those of the Aryan and Semitic families, are such that it would be impossible to ascribe them to mere accident.

The name Turanian is used in opposition to Aryan, and is applied to the nomadic races of Asia as opposed to the agricultural or Aryan races.

The Turanian family or class consists of two great divisions, the *Northern* and the *Southern*.

The Northern is sometimes called the *Ural-Altaic* or *Ugro-Tataric*, and it is divided into five sections, the *Tungusic*, *Mongolic*, *Turkic*, *Finnic*, and *Samoyedic*.

herent in language, extend their influence irresistibly. Languages arrested in that stage would cling with equal tenacity to the system of agglutination. A Chinese can hardly understand how language is possible, unless every syllable is significative; a Turanian despises every idiom in which each word does not display distinctly its radical and significative element; whereas, we who are accustomed to the use of inflectional languages, are proud of the very grammar which a Chinese and Turanian would treat with contempt.

The fact, therefore, that languages, if once settled, do not change their grammatical constitution, is no argument against our theory, that every inflectional language was once agglutinative, and every agglutinative language was once monosyllabic. I call it a theory, but it is more than a theory, for it is the only possible way in which the realities of Sanskrit or any other inflectional language can be explained. As far as the formal part of language is concerned, we cannot resist the conclusion that what is now *inflectional* was formerly *agglutinative*, and what is now *agglutinative* was at first *radical*. The great stream of language rolled on in numberless dialects, and changed its grammatical coloring as it passed from time to time through new deposits of thought. The different channels which left the main current and became stationary and stagnant, or, if you like, literary and traditional, retained forever that coloring which the main current displayed at the stage of their separation. If we call the radical stage *white*, the agglutinative *red*, and the inflectional *blue*, then we may well understand why the white channels should show hardly a drop of red or blue, or why the red channels should

with regard to a common origin of the Aryan and Semitic dialects; while on the contrary the analysis of the grammatical forms in either family has removed many difficulties, and made it at least intelligible how, with materials identical or very similar, two individuals, or two families, or two nations, could in the course of time have produced languages so different in form as Hebrew and Sanskrit.

But still greater light was thrown on the formative and metamorphic process of language by the study of other dialects unconnected with Sanskrit or Hebrew, and exhibiting before our eyes the growth of those grammatical forms (grammatical in the widest sense of the word) which in the Aryan and Semitic families we know only as formed, not as forming; as decaying, not as living; as traditional, not as understood and intentional: I mean the Turanian languages. The traces by which these languages attest their original relationship are much fainter than in the Semitic and Aryan families, but they are so of necessity. In the Aryan and Semitic families, the agglutinative process, by which alone grammatical forms can be obtained, has been arrested at some time, and this could only have been through religious or political influences. By the same power through which an advancing civilization absorbs the manifold dialects in which every spoken idiom naturally represents itself, the first political or religious centralization must necessarily have put a check on the exuberance of an agglutinative speech. Out of many possible forms one became popular, fixed, and technical for each word, for each grammatical category; and by means of poetry, law, and religion, a literary or po-



them. It has been there for thousands of years. They acquire the use of a language, and, as they grow up, they may acquire the use of a second and a third. It is useless to inquire whether infants, left to themselves, would invent a language. It would be impossible, unnatural, and illegal to try the experiment, and, without repeated experiments, the assertions of those who believe and those who disbelieve the possibility of children inventing a language of their own, are equally valueless. All we know for certain is, that an English child, if left to itself, would never begin to speak English, and that history supplies no instance of any language having thus been invented.

If we want to gain an insight into the faculty of flying, which is a characteristic feature of birds, all we can do is, first, to compare the structure of birds with that of other animals which are devoid of that faculty, and secondly, to examine the conditions under which the act of flying becomes possible. It is the same with speech. Speech is a specific faculty of man. It distinguishes man from all other creatures; and if we wish to acquire more definite ideas as to the real nature of human speech, all we can do is to compare man with those animals that seem to come nearest to him, and thus to try to discover what he shares in common with these animals, and what is peculiar to him and to him alone. After we have discovered this, we may proceed to inquire into the conditions under which speech becomes possible, and we shall then have done all that we can do, considering that the instruments of our knowledge, wonderful as they are, are yet far too weak to carry us into all the regions to which we may soar on the wings of our imagination.